LED ICAO Taxiway and Runway Signs
Internally Illuminated

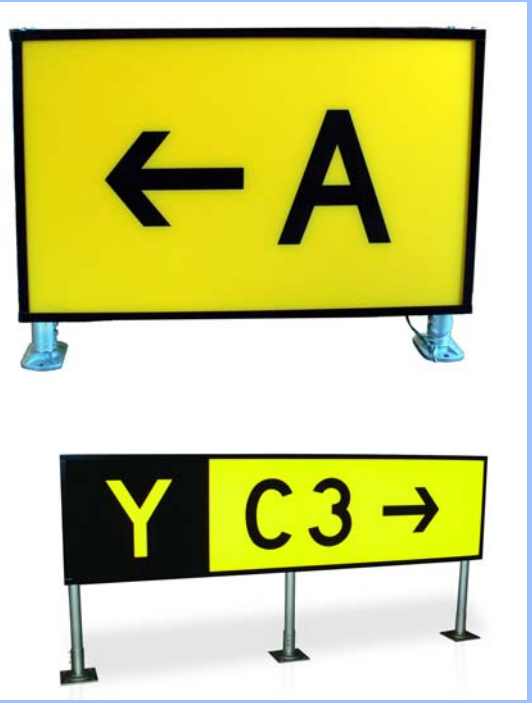
User Manual

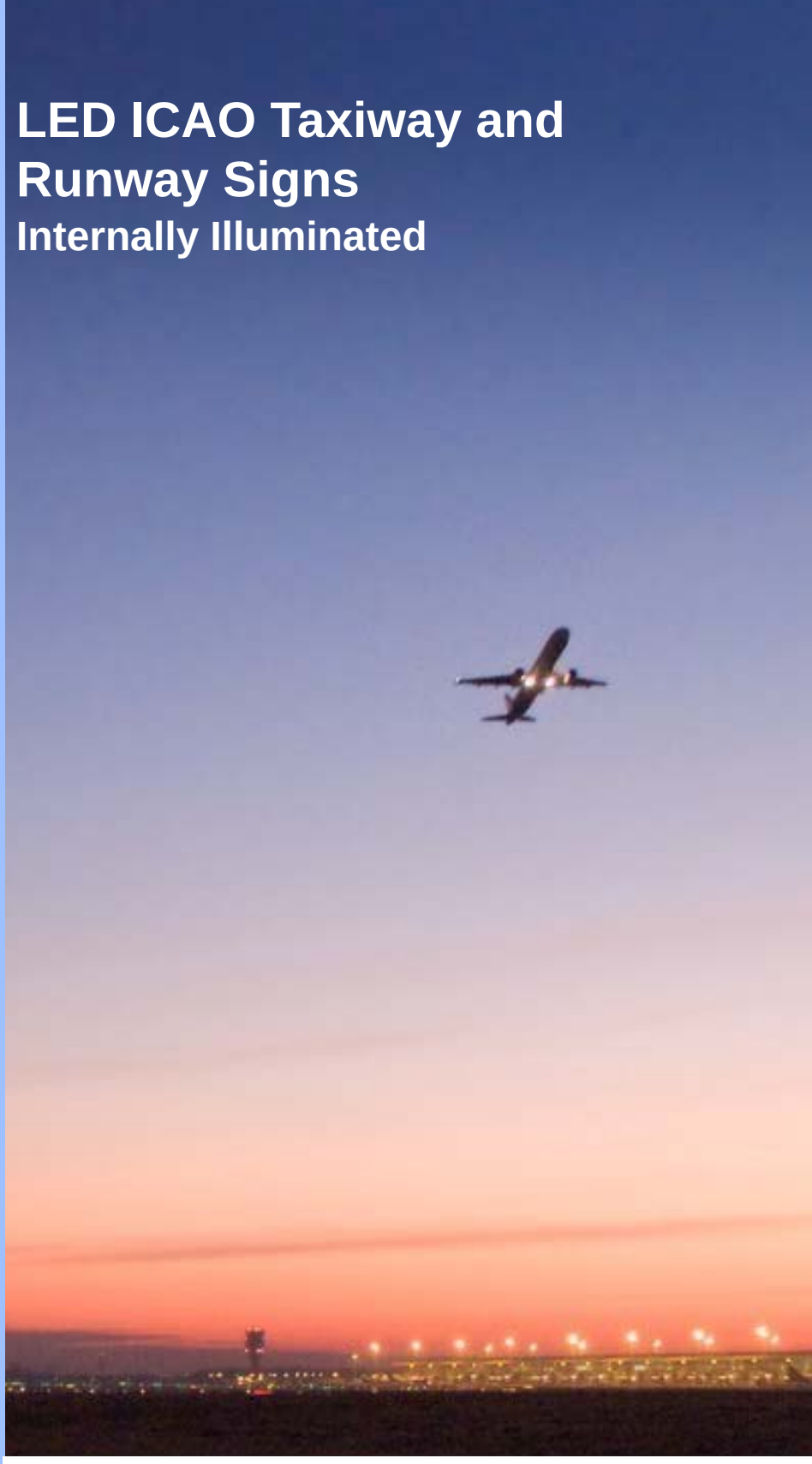
96A0436

Retain for future use.

Rev. C, 11/4/11

ICAO: Annex 14, Volume I,
para 5.4 and Appendix 4





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a.1 History of Change

PAGE	REV	DESCRIPTION	EC NO.	CHECKED	APPROVED	DATE
All	A	Released Manual	3319	DR	ER	07/08/11
All	B	Added Canadian models		DR	ER	9/15/11
All	C	Added new drawings and schematics		DR	ER	11/04/11

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1.0 Safety

This section contains general safety instructions for installing and using ADB Airfield Solutions equipment. Some safety instructions may not apply to the equipment in this manual. Task- and equipment-specific warnings are included in other sections of this manual where appropriate.

1.1 To use this equipment safely:

WARNING

Read installation instructions in their entirety before starting installation.

- Refer to the FAA Advisory Circular AC 150/5340-26, Maintenance of Airport Visual Aids Facilities, for instructions on safety precautions.
- Observe all safety regulations. To avoid injuries, always disconnect power before making any wiring connections or touching any parts. Refer to FAA Advisory Circular AC 150/5340-26.
- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Make this manual available to personnel installing, operating, maintaining or repairing this equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

1.1.1 Additional Reference Materials:

- C22.1 Canadian Electrical Code (latest rev)
- NFPA 70B, Electrical Equipment Maintenance.
- NFPA 70E, Electrical Safety Requirements for Employee Workplaces.
- ANSI/NFPA 79, Electrical Standards for Metalworking Machine Tools.
- OSHA 29 CFR, Part 1910, Occupational Health and Safety Standards.
- National and local electrical codes and standards.

1.1.2 Qualified Personnel

The term **qualified personnel** is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations and have been trained to safely install, operate, maintain and repair the equipment. It is the responsibility of the company operating this equipment to ensure that its personnel meet these requirements.

Always use required personal protective equipment (PPE) and follow safe electrical work practices.

1.1.3 Intended Use

WARNING

Using this equipment in ways other than described in this manual may result in personal injury, death or property and equipment damage. Use this equipment only as described in this manual.

ADB Airfield Solutions cannot be responsible for injuries or damages resulting from nonstandard, unintended applications of its equipment. This equipment is designed and intended only for the purpose described in this manual. Uses not described in this manual are considered unintended uses and may result in serious personal injury, death or property and equipment damage. Unintended uses may result from taking the following actions:

- Making changes to equipment that are not recommended or described in this manual or using parts that are not genuine ADB Airfield Solutions replacement parts.
- Failing to make sure that auxiliary equipment complies with approval-agency requirements, local codes and all applicable safety standards.
- Using materials or auxiliary equipment that are inappropriate or incompatible with ADB Airfield Solutions equipment.
- Allowing unqualified personnel to perform any task.

1.1.4 Storage

CAUTION

If equipment is to be stored prior to installation, it must be protected from the weather and kept free of condensation and dust.

Failure to follow this instruction can result in injury or equipment damage.

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1.1.4.1 Operation

WARNING

- Only qualified personnel, physically capable of operating the equipment and with no impairments in their judgment or reaction times, should operate this equipment.
- Read all system component manuals before operating this equipment. A thorough understanding of system components and their operation will help you operate the system safely and efficiently.
- Before starting this equipment, check all safety interlocks, fire-detection systems, and protective devices such as panels and covers. Make sure all devices are fully functional. Do not operate the system if these devices are not working properly. Do not deactivate or bypass automatic safety interlocks or locked-out electrical disconnects or pneumatic valves.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Never operate equipment with a known malfunction.
- Do not attempt to operate or service electrical equipment if standing water is present.
- Use this equipment only in the environments for which it is rated. Do not operate this equipment in humid, flammable, or explosive environments unless it has been rated for safe operation in these environments.
- Never touch exposed electrical connections on equipment while the power is ON.

1.1.4.2 Material Handling Precautions

CAUTION

This equipment may contain electrostatic sensitive devices.

- Protect from electrostatic discharge.
- Electronic modules and components should be touched only when this is unavoidable e.g. soldering, replacement.
- Before touching any component of the cabinet you should bring your body to the same potential as the cabinet by touching a conductive earthed part of the cabinet.
- Electronic modules or components must not be brought in contact with highly insulating materials such as plastic sheets, synthetic fiber clothing. They must be laid down on conductive surfaces.
- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.

1.1.4.3 Action in the Event of a System or Component Malfunction

WARNING

- Do not operate a system that contains malfunctioning components. If a component malfunctions, turn the system OFF immediately.
- Disconnect and lock out electrical power.
- Allow only qualified personnel to make repairs. Repair or replace the malfunctioning component according to instructions provided in its manual.

1.1.4.4 Maintenance and Repair

WARNING

Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks.

- Only persons who are properly trained and familiar with ADB Airfield Solutions equipment are permitted to service this equipment.
- Disconnect and lock out electrical power.
- Always use safety devices when working on this equipment.
- Follow the recommended maintenance procedures in the product manuals.
- Do not service or adjust any equipment unless another person trained in first aid and CPR is present.
- Connect all disconnected equipment ground cables and wires after servicing equipment. Ground all conductive equipment.
- Use only approved ADB Airfield Solutions replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.
- Check interlock systems periodically to ensure their effectiveness.
- Do not attempt to service electrical equipment if standing water is present. Use caution when servicing electrical equipment in a high-humidity environment.
- Use tools with insulated handles when working with electrical equipment.

1.1.4.5 Operation of Overloaded Regulators

WARNING

- Operation of a Regulator while overloaded at any step may result in equipment failure or equipment damage.

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2.0 Introduction

These signs are designed to guide pilots to a particular point on the field, identify holding positions, identify taxiway and runway intersections, and prohibit aircraft entry into designated areas.

2.1 Compliance with Standards

- ICAO: Annex 14, Volume I, para 5.4 and Appendix 4.

2.1.1 Uses

These signs are designed to guide pilots to a particular point on the field, identify holding positions, identify taxiway and runway intersections, and prohibit aircraft entry into designated areas.

On Civil Airfields:

- Mandatory instruction signs.
- Information signs.
- VOR check-point sign.

On Military Airbases: same as above, plus:

- Runway distance-to-go signs.
- Arrester barrier signs.

2.1.2 Sign Selection

Extensive guidance material on the selection and the definition of the length of signs is provided in Chapter 5.4 and Appendix 4 of ICAO Annex 14.

Sign sizes are governed by :

1. The runway code they are associated to (for their height).
2. Their type : Mandatory or Information.
3. The message length.

Mandatory signs are used to identify a location beyond which an authorization from the tower is required to proceed. They include road-, taxi- and Cat I, II and III holding position signs, runway designation signs and “NO ENTRY” signs. They have white legends on red background.

Information signs are all the other signs (except runway distance signs) providing information on routing (direction or destination) and on location. Information signs have black lettering on yellow background, except location signs. Location signs have a yellow legend on a black background. The message on stand-alone location signs is surrounded by a yellow border.

2.1.3 Features

- Virtually eliminates runway shutdowns due to the long-lasting LED light source.
- Direct replacement for existing sign.
- Creates a highly uniform distribution of light, eliminating hot spots and shadows.
- Can be powered from either a ferroresonant or thyristor type CCR.
- Operates on 3-step, 5-step and 5.5A series circuits.
- Eliminates re-lamping expenses and reduces on-going maintenance costs.
- Improved safety – lower, regulated DC voltage inside sign.
- Exceeds latest ICAO requirements for luminance and colorimetry.
- Modular construction: commonality of mechanical and electrical components throughout entire sign range.
- Low mass, frangible yet rigid construction based on aluminium extrusions and panels.

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2.1.3.1 Conditions for Continuous Outdoor Use

The taxiway and runway signs are designed for continuous outdoor use under the conditions presented below for operating temperature range, wind, and rain.

2.1.3.2 Operating Conditions

- Temperature: -40°F to +131°F (-40°C to +55°C).
- Humidity: 0 to 100%.
- Wind:
  - — ADB standard signs withstand a wind loading of 320 km/h (200 mph) and break before the wind loading reaches 480 km/h (300 mph).

2.1.3.3 Frangibility

All signs sustain a static load of 0.9 PSI (6.21 kPa) uniformly [200 mph (322 Km/h) wind] over the entire surface of the sign and break over before reaching 1.3 PSI (8.96 kPa).

2.1.3.4 Construction

Corrosion-resistant sign construction requires minimal maintenance. The sign uses aluminum housing, acrylic sign legend panels, stainless steel hardware, and translucent sheeting.

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2.1.4 Electrical Supply

The L-858 signs are internally lighted. The signs are connected to a series circuit using the appropriately-sized 50 or 60Hz L-830/L-831 isolation transformer(s).

Table 1: Style No. and Power Source

2	4.8-6.6A (3-Step CCR)
3	2.8-6.6A (5-Step CCR)
5	5.5A (Dedicated sign circuit)

2.1.5 Sign Load & Transformer Requirements

2.1.5.1 600 mm *

In the table below, the number for the total VA load imposed on the CCR represents the actual load imposed on the regulator and accounts for power factor and load imposed by the transformer.

Part #/	Sign Length	3-step (4.8-6.6A) FAA Style 2	5-step (2.8-6.6A) FAA Style 3	Single-step (5.5A) FAA Style 5	Max VA	Power Factor
SI6A	700	200W	200W	100W	84	0.82
SI6B	900	200W	200W	100W	84	0.82
SI6C	1100	200W	200W	100W	84	0.82
SI6D	1300	200W	200W	100W	84	0.82
SI6E	1500	200W	200W	100W	84	0.82
SI6F	1700	200W	200W	100W	84	0.82
SI6G	1900	200W	200W	100W	86	0.84
SI6H	2100	200W	200W	100W	86	0.84
SI6J	2300	200W	200W	100W	86	0.83
SI6K	2500	200W	200W	100W	86	0.83
SI6L	2700	200W	200W	100W	120	0.88
SI6M	2900	200W	200W	100W	120	0.88
SI6N	3300	200W	200W	100W	118	0.88
SI6P	3700	200W	300W	150W	146	0.88
SI6A2	700	200W	200W	100W	84	0.82
SI6B2	900	200W	200W	100W	84	0.82
SI6C2	1100	200W	200W	100W	86	0.83
SI6D2	1300	200W	200W	100W	86	0.83
SI6E2	1500	200W	200W	100W	120	0.88
SI6F2	1700	200W	200W	100W	120	0.88
SI6G2	1900	200W	300W	150W	146	0.88
SI6H2	2100	200W	300W	150W	146	0.88
SI6J2	2300	200W	300W	150W	206	0.85
SI6K2	2500	200W	300W	150W	206	0.85
SI6L2	2700	200W	300W	150W	234	0.87
SI6M2	2900	200W	300W	150W	234	0.87
SI6N2	3300	200W	500W	200W	234	0.87
SI6P2	3700	300W	500W	200W	249	0.87

[1] * Load data listed above are estimates for worst case scenario

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2.1.5.2 800 mm *

In the table below, the number for the total VA load imposed on the CCR represents the actual load imposed on the regulator and accounts for power factor and load imposed by the transformer.

Part #/	Sign Length	3-step (4.8-6.6A) FAA Style 2	5-step (2.8-6.6A) FAA Style 3	Single-step (5.5A) FAA Style 5	Max VA	Power Factor
SI8A	700	200W	200W	100W	84	0.82
SI8B	900	200W	200W	100W	84	0.82
SI8C	1100	200W	200W	100W	84	0.82
SI8D	1300	200W	200W	100W	84	0.82
SI8E	1500	200W	200W	100W	84	0.82
SI8F	1700	200W	200W	100W	86	0.84
SI8G	1900	200W	200W	100W	86	0.84
SI8H	2100	200W	200W	100W	86	0.84
SI8J	2300	200W	200W	100W	118	0.88
SI8K	2500	200W	200W	100W	118	0.88
SI8L	2700	200W	200W	100W	118	0.88
SI8M	2900	200W	200W	100W	118	0.88
SI8N	3300	200W	300W	150W	146	0.88
SI8P	3700	200W	300W	150W	206	0.85
SI8A2	700	200W	200W	100W	86	0.84
SI8B2	900	200W	300W	200W	118	0.88
SI8C2	1100	200W	300W	200W	118	0.88
SI8D2	1300	200W	300W	200W	118	0.88
SI8E2	1500	200W	300W	200W	118	0.88
SI8F2	1700	200W	300W	300W	146	0.88
SI8G2	1900	300W	500W	300W	206	0.85
SI8H2	2100	300W	500W	300W	206	0.85
SI8J2	2300	300W	500W	300W	234	0.88
SI8K2	2500	300W	500W	300W	234	0.88
SI8L2	2700	300W	500W	300W	234	0.88
SI8M2	2900	300W	500W	300W	234	0.88
SI8N2	3300	500W	500W	300W	262	0.88
SI8P2	3700	500W	500W	300W	262	0.88

[1] * Load data listed above are estimates for worst case scenario

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2.1.6 Operation

The LEDs are connected in a proprietary manner to ensure the longest product lifetime and allow the sign to remain operational in the event of several individual LED failures.

2.1.7 Spare Components

Description	Part No.
For frangible couplings, see drawing 117A0069[1]	"Dimensions" on page 8 thru "Mounting Detail" on page 12
Cord set, L-823	73A0107-72
Cord set, TP 312E, 12/2 SO cord, 2.5 m	73A0155-2.5
Floor flange (2-bolt)[2]	62A2142
Floor flange (4-bolt)[2]	62A2146
Tether	94A0054
ICAO 600 mm LED sign power supply assembly	44A7156-100
ICAO 800 mm LED sign power supply assembly (single)[3]	44A7086-ICAO

[1] This drawing is available on the ADB website or you can request a copy from your sales representative.

[2] Refer to drawing 117A0069 to determine which floor flange is needed.

[3] For double-sided signs, contact ADB Sales to determine if a dual power supply assembly is required.

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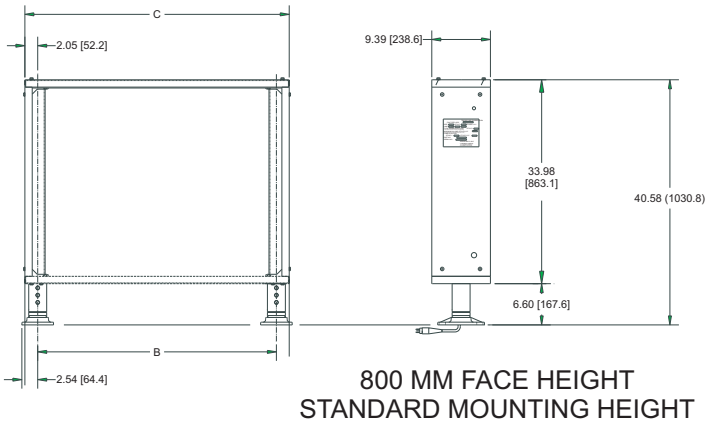
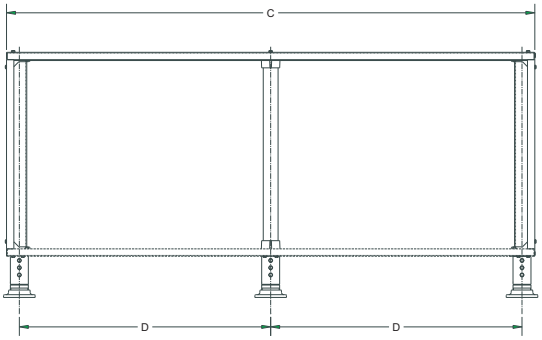
2.2 Dimensions

See Figure 1 and Table 2 for sign dimensions. See Figure 2 for the mounting flange used.

2.2.1 Sizes

Figure 1: Sign Dimensions





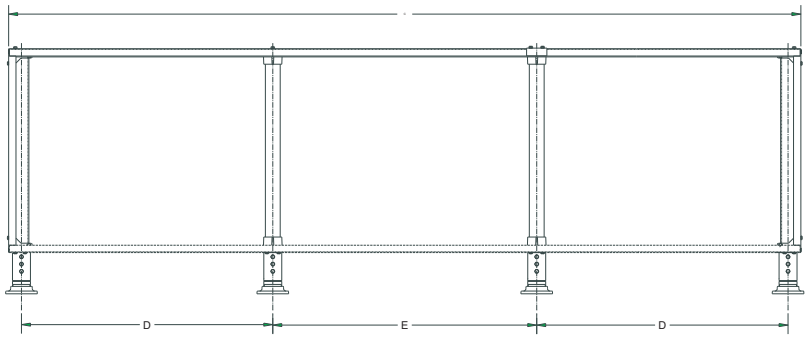


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Table 2: 800 mm Face, Standard Height Sign Dimensions (inches/mm)

SIZE, MODULES	ILLUMINATED FACE LENGTH	B	C	D	E	FRANGIBLE COUPLING	MOUNTING FLANGE	MOUNTING DETAIL
SIXA/	700 MM	25.80 (655.3)	29.91 (759.7)	N/A	N/A	60A2678/60	62A2142	A
SIXB/	900 MM	33.68 (855.5)	37.79 (959.9)	N/A	N/A	60A2678/20	62A2142	A
SIXC/	1100 MM	41.55 (1055.4)	45.66 (1159.8)	N/A	N/A	60A2678/20	62A2142	A
SIXD/	1300 MM	49.42 (1255.3)	53.53 (1359.7)	N/A	N/A	60A2678/30	62A2142	A
SIXE/	1500 MM	57.30 (1455.4)	61.41 (1559.8)	N/A	N/A	60A2678/40	62A2142	A
SIXF/	1700 MM	N/A	69.28 (1759.7)	32.59 (827.7)	N/A	60A2678/30	62A2142	A
SIXG/	1900 MM	N/A	77.16 (1959.7)	36.53 (927.7)	N/A	60A2678/40	62A2142	A
SIXH/	2100 MM	N/A	85.03 (2159.7)	40.46 (1027.7)	N/A	60A2678/21	62A2146	B
SIXJ/	2300 MM	N/A	92.90 (2359.7)	44.40 (1127.7)	N/A	60A2678/21	62A2146	B
SIXK/	2500 MM	N/A	100.78 (2559.7)	48.34 (1227.7)	N/A	60A2678/50	62A2146	B
SIXL/	2700 MM	N/A	108.65 (2759.7)	52.27 (1327.7)	N/A	60A2678/50	62A2146	B
SIXM/	2900 MM	N/A	116.53 (2959.7)	56.21 (1427.7)	N/A	60A2678/50	62A2146	B
SIXN/	3300 MM	N/A	132.27 (3359.7)	42.43 (1077.7)	43.31 (1100.0)	60A2678/50	62A2146	B
SIXP/	3700 MM	N/A	148.02 (3759.7)	50.30 (1277.7)	43.31 (1100.0)	60A2678/50	62A2146	B

Figure 2: 800 mm Face, 48”, 60” and 72” Height Sign Dimensions (inches/mm)

SIZE, MODULES	ILLUMINATED FACE LENGTH	B	C	D	E	FRANGIBLE COUPLING	MOUNTING FLANGE	MOUNTING DETAIL
SIXA/	700 MM	25.80 (655.3)	29.91 (759.7)	N/A	N/A	60A2678/20	62A2142	A
SIXB/	900 MM	33.68 (855.5)	37.79 (959.9)	N/A	N/A	60A2678/30	62A2142	A
SIXC/	1100 MM	41.55 (1055.4)	45.66 (1159.8)	N/A	N/A	60A2678/30	62A2142	A
SIXD/	1300 MM	49.42 (1255.3)	53.53 (1359.7)	N/A	N/A	60A2678/40	62A2142	A
SIXE/	1500 MM	57.30 (1455.4)	61.41 (1559.8)	N/A	N/A	60A2678/21	62A2146	B
SIXF/	1700 MM	N/A	69.28 (1759.7)	32.59 (827.7)	N/A	60A2678/21	62A2146	B
SIXG/	1900 MM	N/A	77.16 (1959.7)	36.53 (927.7)	N/A	60A2678/50	62A2146	B
SIXH/	2100 MM	N/A	85.03 (2159.7)	40.46 (1027.7)	N/A	60A2678/50	62A2146	B
SIXJ/	2300 MM	N/A	92.90 (2359.7)	44.40 (1127.7)	N/A	60A2678/31	62A2146	B
SIXK/	2500 MM	N/A	100.78 (2559.7)	48.34 (1227.7)	N/A	60A2678/31	62A2146	B
SIXL/	2700 MM	N/A	108.65 (2759.7)	52.27 (1327.7)	N/A	60A2678/41	62A2146	B
SIXM/	2900 MM	N/A	116.53 (2959.7)	56.21 (1427.7)	N/A	60A2678/41	62A2146	B
SIXN/	3300 MM	N/A	132.27 (3359.7)	42.43 (1077.7)	43.31 (1100.0)	60A2678/41	62A2146	B
SIXP/	3700 MM	N/A	148.02 (3759.7)	50.30 (1277.7)	43.31 (1100.0)	60A2678/41	62A2146	B

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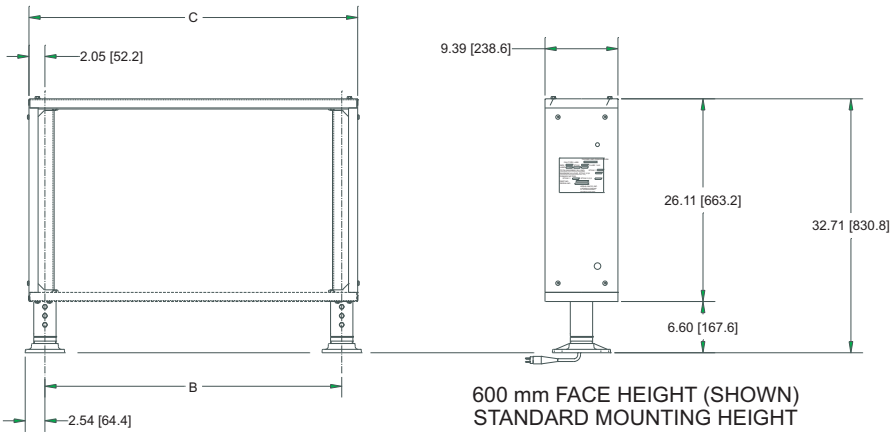
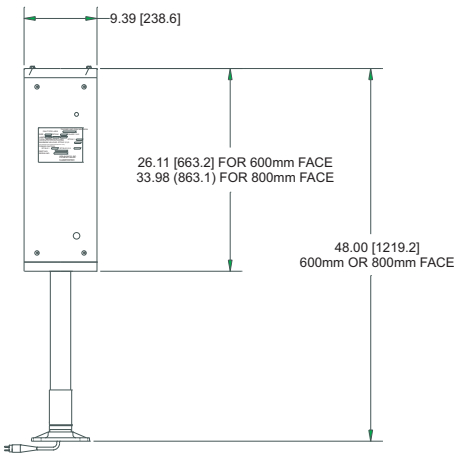
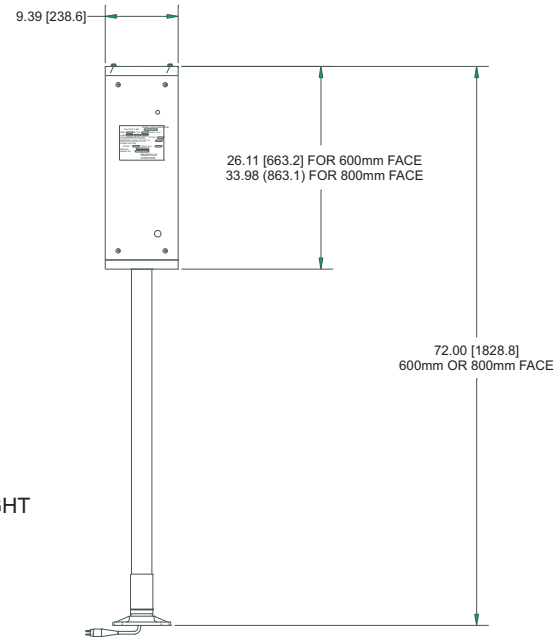
600 mm Face Signs



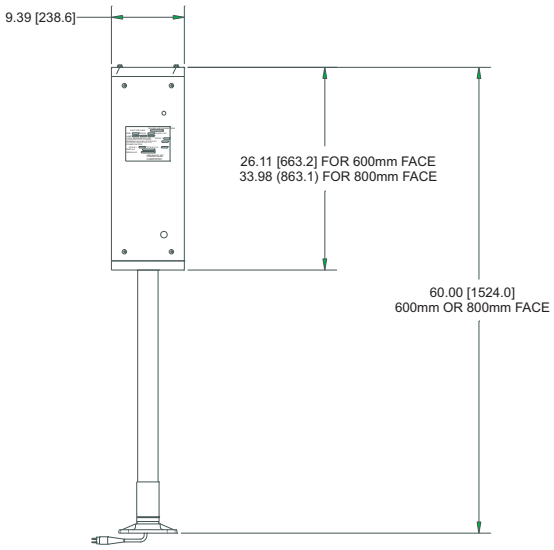
600 mm FACE HEIGHT (SHOWN)
STANDARD MOUNTING HEIGHT



600 mm FACE HEIGHT (SHOWN) OR 800mm FACE HEIGHT
48" MOUNTING HEIGHT



600 mm FACE HEIGHT (SHOWN) OR 800mm FACE HEIGHT
72" MOUNTING HEIGHT



600 mm FACE HEIGHT (SHOWN) OR 800mm FACE HEIGHT
60" MOUNTING HEIGHT

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Figure 3: 600 mm Face, Standard Height Sign Dimensions (inches/mm)

SIZE, MODULES	ILLUMINATED FACE LENGTH	B	C	D	E	FRANGIBLE COUPLING	MOUNTING FLANGE	MOUNTING DETAIL
SIXA/	700 MM	25.80 (655.3)	29.91 (759.7)	N/A	N/A	60A2678/10	62A2142	A
SIXB/	900 MM	33.68 (855.5)	37.79 (959.9)	N/A	N/A	60A2678/10	62A2142	A
SIXC/	1100 MM	41.55 (1055.4)	45.66 (1159.8)	N/A	N/A	60A2678/60	62A2142	A
SIXD/	1300 MM	49.42 (1255.3)	53.53 (1359.7)	N/A	N/A	60A2678/60	62A2142	A
SIXE/	1500 MM	57.30 (1455.4)	61.41 (1559.8)	N/A	N/A	60A2678/20	62A2142	A
SIXF/	1700 MM	N/A	69.28 (1759.7)	32.59 (827.7)	N/A	60A2678/60	62A2142	A
SIXG/	1900 MM	N/A	77.16 (1959.7)	36.53 (927.7)	N/A	60A2678/20	62A2142	A
SIXH/	2100 MM	N/A	85.03 (2159.7)	40.46 (1027.7)	N/A	60A2678/20	62A2142	A
SIXJ/	2300 MM	N/A	92.90 (2359.7)	44.40 (1127.7)	N/A	60A2678/30	62A2142	A
SIXK/	2500 MM	N/A	100.78 (2559.7)	48.34 (1227.7)	N/A	60A2678/30	62A2142	A
SIXL/	2700 MM	N/A	108.65 (2759.7)	52.27 (1327.7)	N/A	60A2678/30	62A2142	A
SIXM/	2900 MM	N/A	116.53 (2959.7)	56.21 (1427.7)	N/A	60A2678/30	62A2142	A
SIXN/	3300 MM	N/A	132.27 (3359.7)	42.43 (1077.7)	43.31 (1100.0)	60A2678/30	62A2142	A
SIXP/	3700 MM	N/A	148.02 (3759.7)	50.30 (1277.7)	43.31 (1100.0)	60A2678/40	62A2142	A

Figure 4: 600 mm Face, 48”, 60” and 72” Height Sign Dimensions (inches/mm)

SIZE, MODULES	ILLUMINATED FACE LENGTH	B	C	D	E	FRANGIBLE COUPLING	MOUNTING FLANGE	MOUNTING DETAIL
SIXA/	700 MM	25.80 (655.3)	29.91 (759.7)	N/A	N/A	60A2678/60	62A2142	A
SIXB/	900 MM	33.68 (855.5)	37.79 (959.9)	N/A	N/A	60A2678/20	62A2142	A
SIXC/	1100 MM	41.55 (1055.4)	45.66 (1159.8)	N/A	N/A	60A2678/30	62A2142	A
SIXD/	1300 MM	49.42 (1255.3)	53.53 (1359.7)	N/A	N/A	60A2678/40	62A2142	A
SIXE/	1500 MM	57.30 (1455.4)	61.41 (1559.8)	N/A	N/A	60A2678/40	62A2142	A
SIXF/	1700 MM	N/A	69.28 (1759.7)	32.59 (827.7)	N/A	60A2678/40	62A2142	A
SIXG/	1900 MM	N/A	77.16 (1959.7)	36.53 (927.7)	N/A	60A2678/21	62A2146	B
SIXH/	2100 MM	N/A	85.03 (2159.7)	40.46 (1027.7)	N/A	60A2678/21	62A2146	B
SIXJ/	2300 MM	N/A	92.90 (2359.7)	44.40 (1127.7)	N/A	60A2678/50	62A2146	B
SIXK/	2500 MM	N/A	100.78 (2559.7)	48.34 (1227.7)	N/A	60A2678/50	62A2146	B
SIXL/	2700 MM	N/A	108.65 (2759.7)	52.27 (1327.7)	N/A	60A2678/31	62A2146	B
SIXM/	2900 MM	N/A	116.53 (2959.7)	56.21 (1427.7)	N/A	60A2678/31	62A2146	B
SIXN/	3300 MM	N/A	132.27 (3359.7)	42.43 (1077.7)	43.31 (1100.0)	60A2678/31	62A2146	B
SIXP/	3700 MM	N/A	148.02 (3759.7)	50.30 (1277.7)	43.31 (1100.0)	60A2678/31	62A2146	B

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2.2.1.1 Mounting Detail

Figure 5: 800 mm Signs

For full sized view, see: “Dimension Diagrams for Installation” on page 49

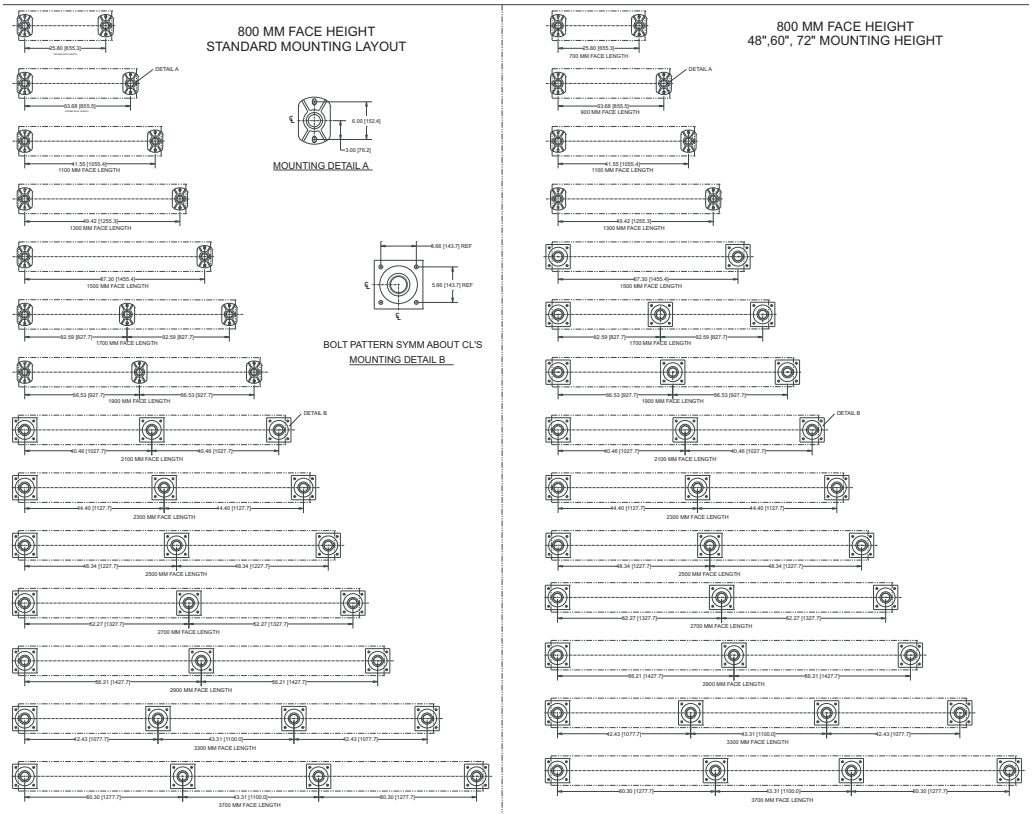
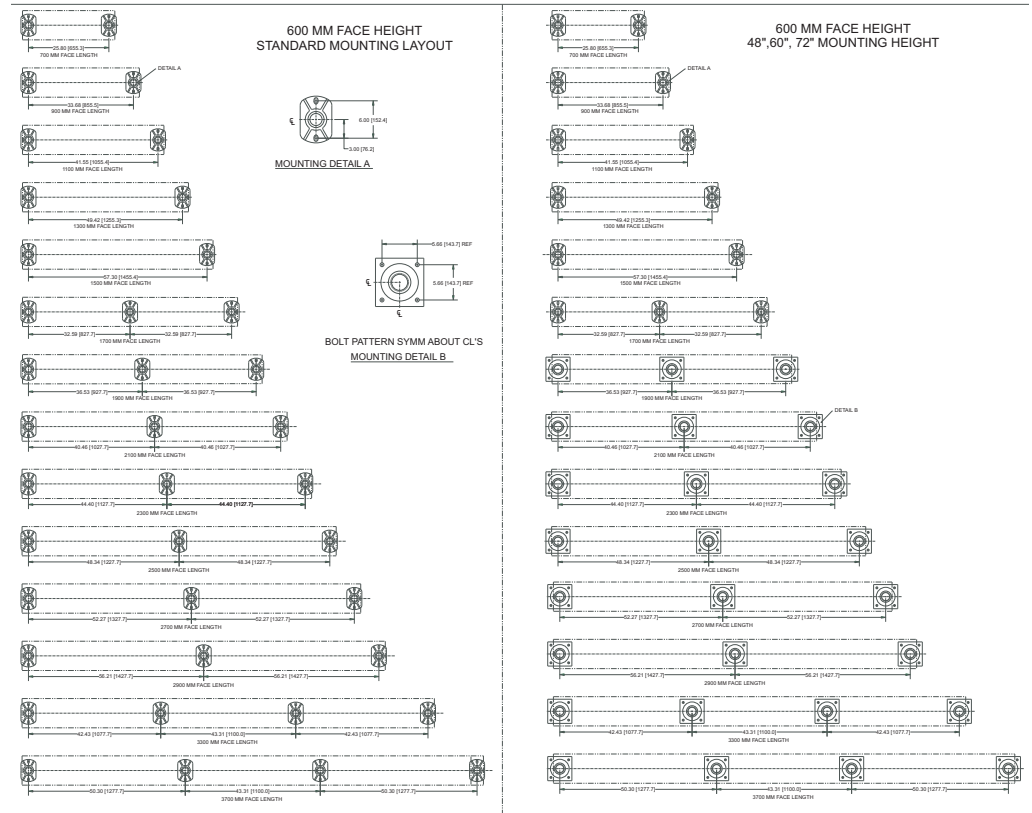


Figure 6: 600 mm Signs



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2.2.2 Packaging Data

Signs are shipped with L-823 cord set(s), frangible couplings, and floor flanges – ready for installation.

Table 3: 800mm signs

Description	Gross Weight[1] (lb)	Gross Weight[1] (kg)	Carton Dimensions (h x w x d[2] (in)	Carton Dimensions (h x w x d[2] (mm)
SI8A	72	32.6	43.5 x 37 x 13	1105 x 950 x 330
SI8B	82	37	43.5 x 45 x 13	1105 x 1150 x 330
SI8C	94	42.6	43.5 x 53 x 13	1105 x 1350 x 330
SI8D	104	47	43.5 x 61 x 13	1105 x 1550 x 330
SI8E	114	51.7	43.5 x 70 x 13	1105 x 1750 x 330
SI8F	136	61.7	43.5 x 77 x 13	1105 x 1950 x 330
SI8G	149	67.6	43.5 x 85 x 13	1105 x 2150 x 330
SI8H	161	73.0	43.5 x 93 x 13	1105 x 2350 x 330
SI8J	173	78.5	43.5 x 100 x 13	1105 x 2550 x 330
SI8K	182	82.5	43.5 x 108 x 13	1105 x 2750 x 330
SI8L	193	87.5	43.5 x 116 x 13	1105 x 2950 x 330
SI8M	205	93	43.5 x 124 x 13	1105 x 3150 x 330
SI8N	242	110	43.5 x 140 x 13	1105 x 3550 x 330
SI8P	265	120.2	43.5 x 156 x 13	1105 x 3950 x 330

1 Weights listed are for standard LED signs. Contact ADB for high wind speed sign weights.

2 Contact ADB for sign shipping weights.

Table 4: 600mm Signs

Desc	Gross Assembled Weight[1] STD Height (lb)	STD Height (kg)	SIDX 48”/1219 mm (lb)	SIDX 48”/1219 mm (kg)	SIEX[2] 60”/1524 mm (lb)	SIEX[2] 60”/1524 mm (kg)	SIFX[2] 72”/1829 mm (lb)	SIFX[2] 72”/1829 mm (kg)	Standard Height Carton Dimensions (h x w x d[2] (in)	Standard Height Carton Dimensions (h x w x d[2] (mm)
SI6A	64	29.0	69	31.3	75	34.0	79	35.8	36 x 37 x 13	914 x 950 x 330
SI6B	72	32.6	77	34.9	83	37.6	87	39.5	36 x 45 x 13	914 x 1150 x 330
SI6C	80	36.3	85	38.5	91	41.3	95	43.1	36 x 53 x 13	914 x 1350 x 330
SI6D	88	39.9	93	42.2	99	44.9	103	46.7	36 x 61 x 13	914 x 1550 x 330
SI6E	97	44.0	102	46.3	108	49.0	112	50.8	36 x 70 x 13	914 x 1750 x 330
SI6F	122	55.3	130	59.0	138	62.6	145	65.8	36 x 77 x 13	914 x 1950 x 330
SI6G	130	59.0	138	62.6	146	66.2	153	69.4	36 x 85 x 13	914 x 2150 x 330
SI6H	138	62.6	146	66.2	154	69.8	161	73.0	36 x 93 x 13	914 x 2350 x 330
SI6J	146	66.2	152	68.9	162	73.5	169	76.6	3.6 x 100 x 13	914 x 2550 x 330
SI6K	153	69.4	161	73.0	169	76.6	176	79.8	36 x 108 x 13	914 x 2750 x 330
SI6L	161	73.0	169	76.6	177	80.3	184	83.5	36 x 116 x 13	914 x 2950 x 330
SI6M	169	76.6	177	80.3	185	83.9	192	87.1	36 x 124 x 13	914 x 3150 x 330
SI6N	203	92.1	213	96.6	225	102.0	233	101.1	36 x 140 x 13	914 x 3550 x 330
SI6P	220	99.8	230	104.3	242	109.8	250	113.4	36 x 156 x 13	914 x 3950 x 330

1 Weights listed are for standard LED signs. Contact ADB for high wind speed sign weights.

2 Shipped as standard height with extensions poles enclosed; requires assembly.

3 Contact ADB for sign shipping weights.

48” signs ship 51”h (1295mm)

CAUTION: 48”, 60” and 72” signs are top heavy, use caution during transportation.

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3.0 Installation

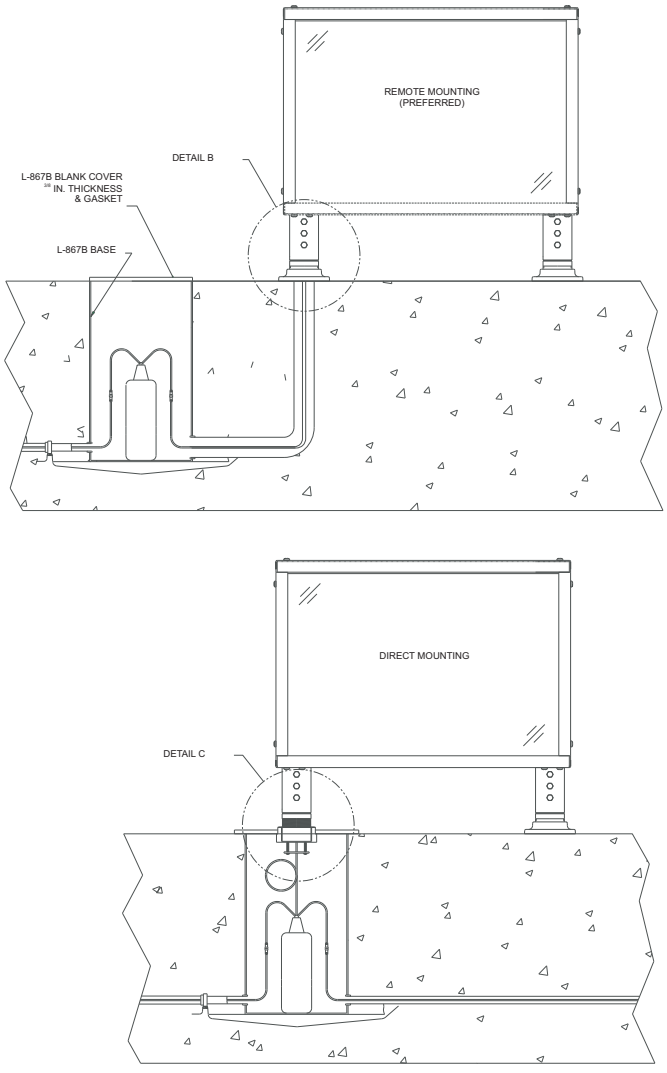
WARNING

Read installation instructions in their entirety before starting installation.

- Refer to the FAA Advisory Circular AC 150/5340-26, Maintenance of Airport Visual Aids Facilities, for instructions on safety precautions.
- Observe all safety regulations. To avoid injuries, always disconnect power before making any wiring connections or touching any parts. Refer to FAA Advisory Circular AC 150/5340-26.
- Sign installation requires a flat mounting surface and the sign to be level to prevent legend panels from becoming distorted.
- Failure to install and level sign per the instruction manual will void the warranty

Each sign is furnished complete with mounting flanges for installation on a concrete pad, which is the recommended method of installation. Contact the ADB Sales Department for more information on sign installation hardware.

Figure 7: Direct/Remote Mounting



This section provides instructions for installing L-858 taxiway and runway signs. Refer to the airport project plans and specifications for the specific installation instructions.

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3.1 Unpacking

The equipment is shipped ready for installation. Handle equipment very carefully to prevent component damage. Unpack the carton upon receipt and check the contents and their condition. Note any exterior damage to the carton that might lead to detection of equipment damage.

If you note any damage to any equipment, file a claim with the carrier immediately. The carrier may need to inspect the equipment.

3.2 Cord Set Installation

This subsection provides information for installing cord sets. It includes sign installation kit reference numbers for three power leg cord set installation locations and mounting configurations.

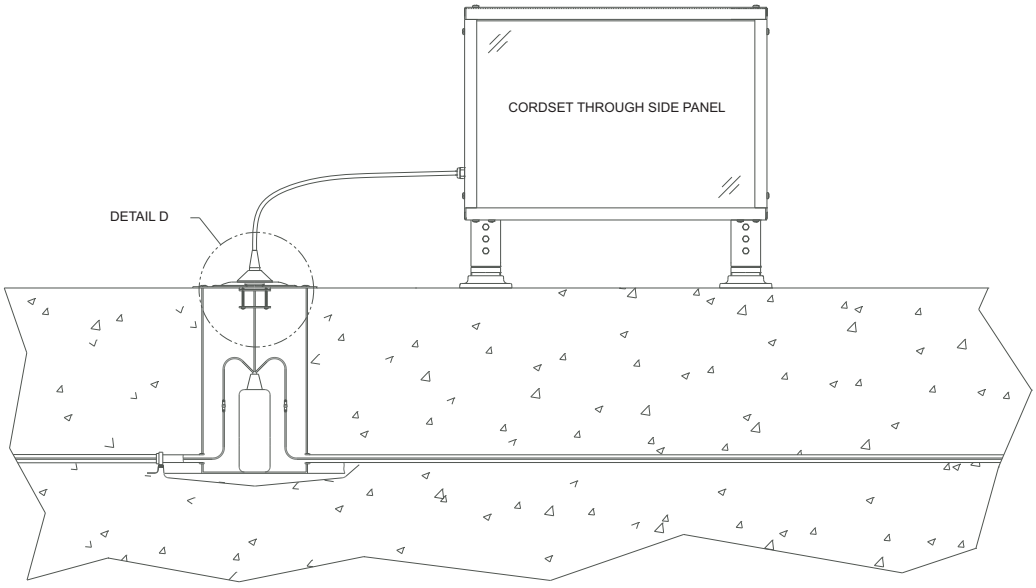
This subsection provides special cord set locations with parts and part numbers.
See Figure 21 for the ordering code for the ICAO sign. Special cord set installation reference numbers are shown in the ordering code.

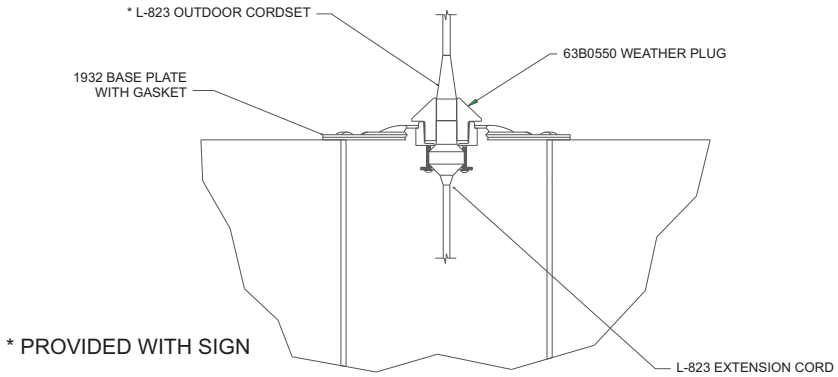
3.2.1 Cord Set Installation Reference Number

3.2.1.1 Cord Set Exit Location #1

Figure 8 shows cord set location #1.

Figure 8: Cord set Location #1 (Non-typical)





DETAIL D
ELECTRICAL CONNECTION

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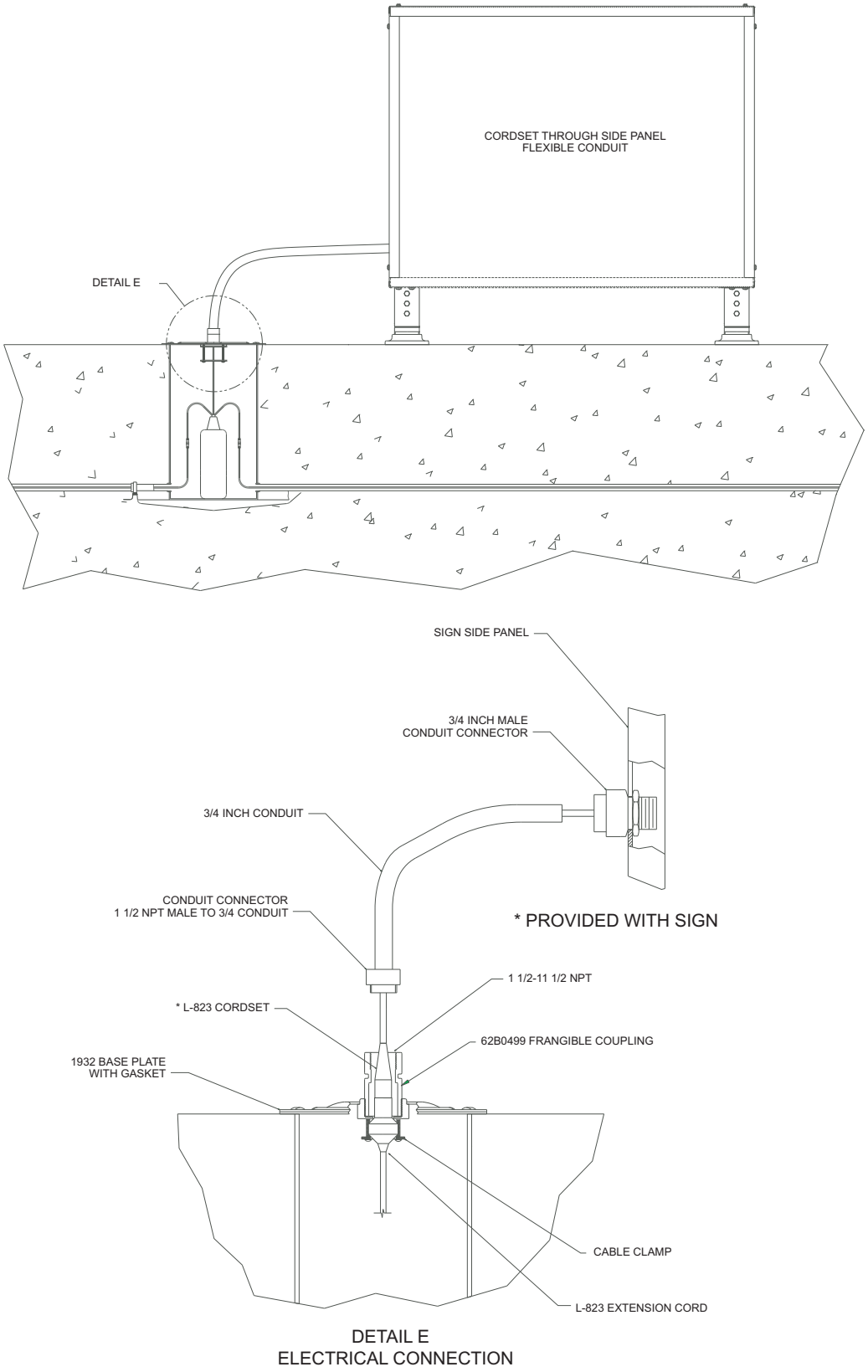
3.2.1.2 Cord set Exit Location #2

Figure 9 shows cord set location #2.

Figure 9: Cord set Location #2 (Non-typical)



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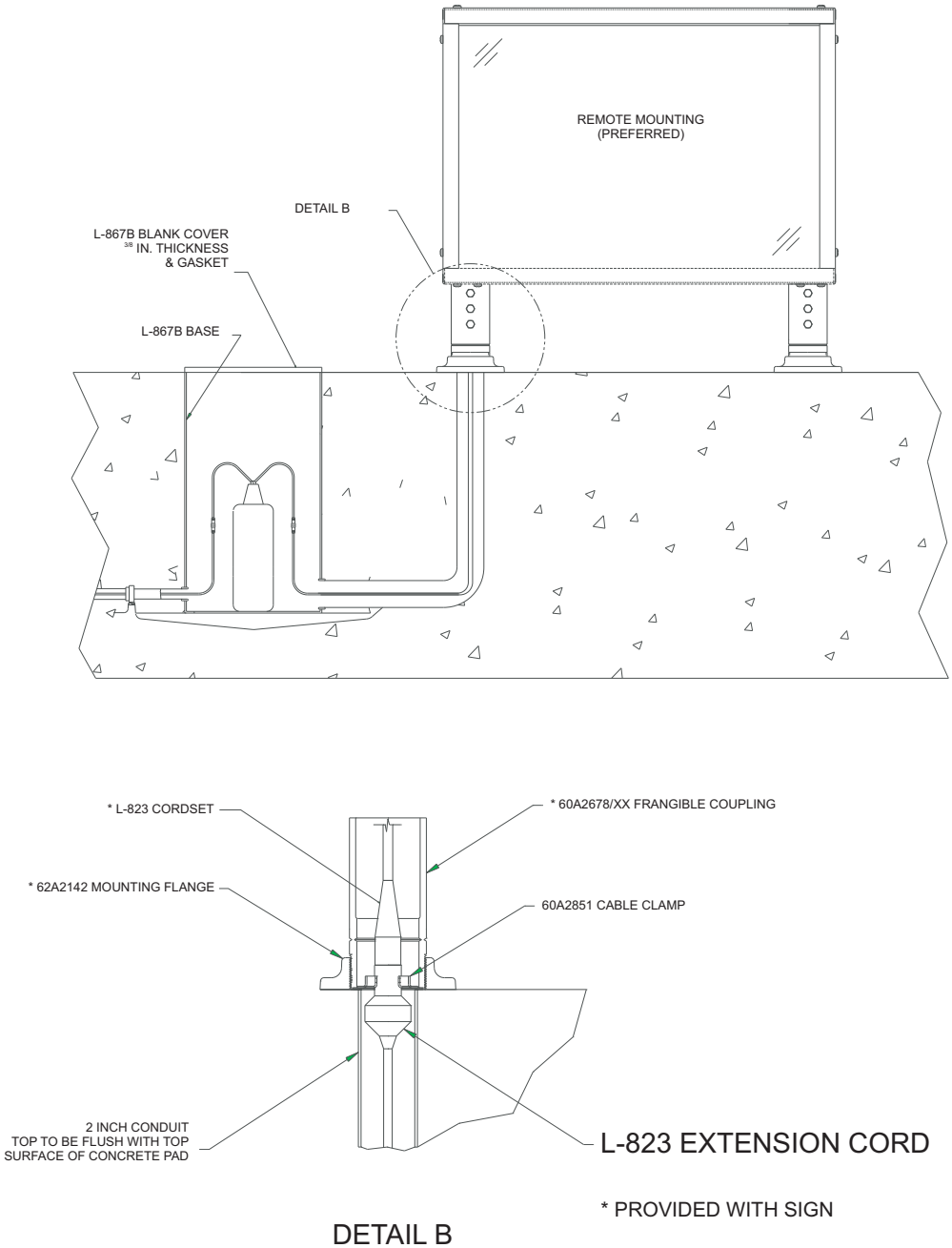
3.2.1.3 Cord set Exit Location #3

Figure 10 shows cord set location #3.

NOTE: Preferred Method.

Figure 10: Cord set Location #3 (Standard)



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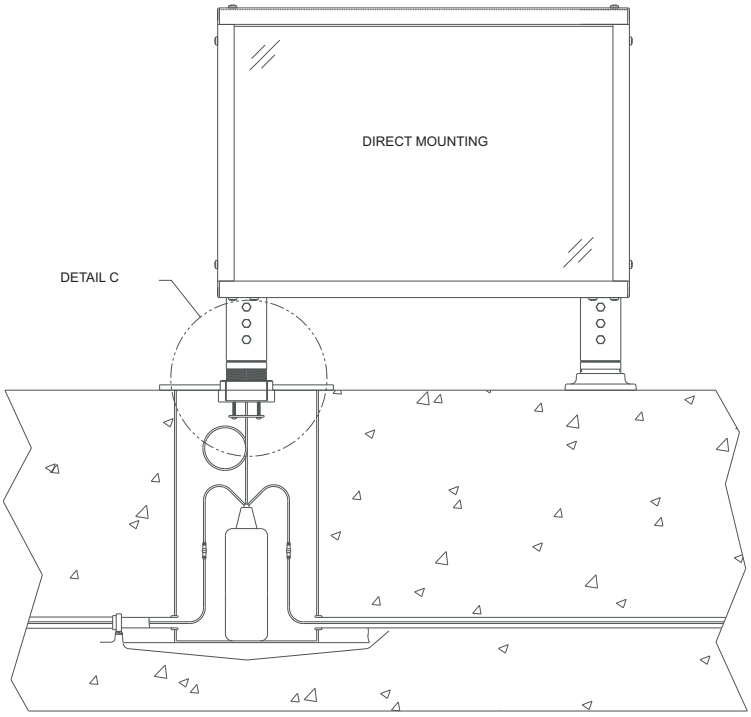
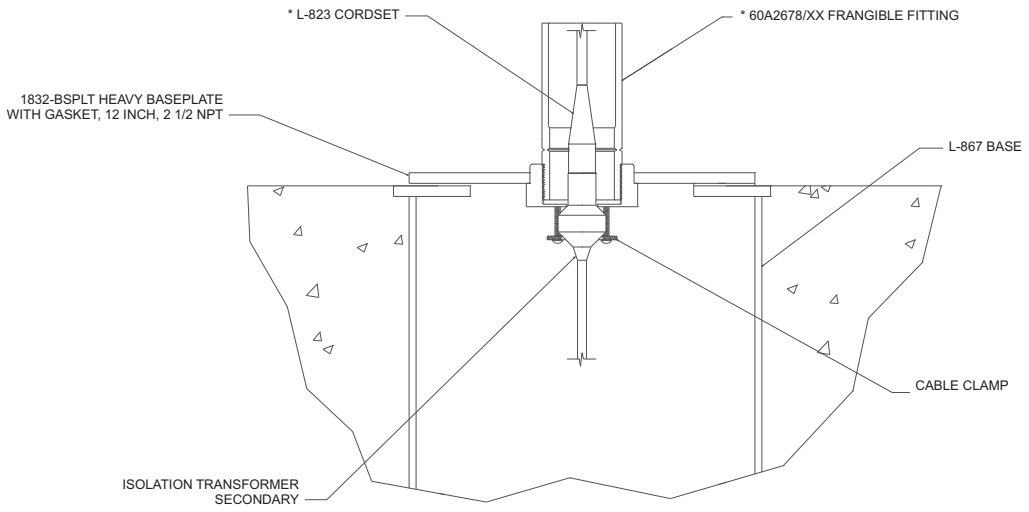
3.2.1.4 Cord set Exit Location #4

Figure 11 shows cord set location #4.

NOTE: Preferred Method.

Figure 11: Cord set Location #4 (Standard)





* PROVIDED WITH SIGN

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3.2.2 Cord set and Extension Cords

See Figure 12. Refer to Table 5 for cord set and extension cord types. Refer to Table 6 for cord set and cord parts.

Figure 12: L-823 Cord set and Extension Cords

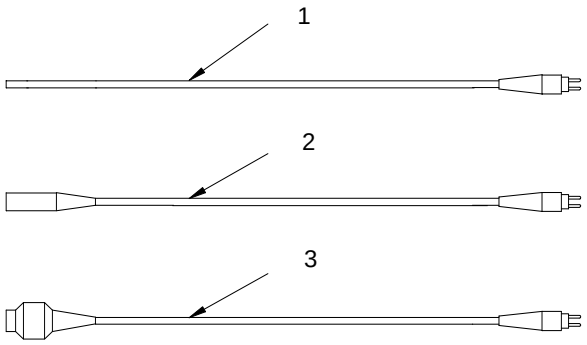

Table 5: Cord set and Extension Cord Length

Type	Part Number	Receptacle Style	Plug Style	Standard Length	Wire
1	73A0107-X	Not applicable	Type II, Class A, Style 1	4 ft. (1.22 mm) 6 ft. (1.83 mm)	16/2
2	73A0108-X	Type II, Class A, Style 7	Type II, Class A, Style 1	8 ft. (2.44 mm)	16/2
3	73A0109-X	Type II, Class A, Style 7	Type II, Class A, Style 1	8 ft. (2.44 mm)	16/2

Table 6: Cord set and Extension Cord Parts

Item	Description	Part Number	Note
1	L-823 cord set, 16/2 wire		A, B
	Cord set, standard size 4 ft. (1.22 mm)	73A0107-48	
	Cord set, standard size 6 ft. (1.83 mm)	73A0107-72	
2	L-823 cord set extension cord, 16/2 wire, standard size 8 ft. (2.44 mm)	73A0108-8	A, C
3	L-823 cord set extension cord, 16/2 wire, standard size 8 ft. (2.44 mm)	73A0109-8	A, D

NOTE:

A: Other sizes require special order.
B: A minimum of thirty inches (762 mm) of cord set length is required for internal sign connections. Usable exterior cord set length is equal to the cord set length minus a minimum of 30 inches (varies with sign size and cord set exit location).
C: Receptacle may be connected to plug on 73A0107-X, 73A0109-8 cord set, or standard 31-inch (787.4 mm) L-823 cord set.
D: Receptacle must be connected to plug on, Plug Type II, Class A, and Style 1, supplied with the sign.

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3.3 General Guidelines

WARNING

- Signs must be grounded to a true earth ground. Failure to observe this warning may result in personal injury, death, or equipment damage.
- When installing signs, follow the guidelines covered in FAA AC 150/5340-30, Fig 126 for mounting pad design. Also see the following subsections for detailed information on sign pad and leveling of the sign.
- FAILURE TO INSTALL AND LEVEL THE SIGN AS DESCRIBED IN THE VARIOUS SUBSECTIONS BELOW WILL VOID THE WARRANTY

- Mount the signs on a concrete slab or concrete pedestals.
- Do not allow concrete edges to protrude above grade.
- The preferred method to connect power to the signs is through a breakaway cable connectors installed within the frangible coupling portion of the sign's mounting legs.
- Install auxiliary equipment, such as isolation transformers, in a light base embedded in the ground.

3.3.1 Overall Mounting Height

Install signs so that the overall height above the surrounding ground of the sign assembly, including mounting supports, does not exceed heights given in ICAO Annex 14. The sign must provide 12 inches (304.8 mm) of clearance between the top of the sign and any part of the most critical aircraft using, or expected to use, the airport when the aircraft's wheels are at the pavement edge.

3.3.2 Sign Orientation

When orienting signs follow the guidelines below.

- Orient the sign so that the face is perpendicular to the centerline of the taxiway or runway.

NOTE: Check site plans and specifications for the location of the power leg (leg where the L-823 cord set is located) in reference to the L-867 light base. Typically, the L-867 light base is immediately under the power leg or is at the same end, but not under the power leg. ADB Airfield Solutions' signs are shipped with the sign product label attached to the sign end where the power leg is located. In addition, verify that the sign legend is orientated correctly to the taxiway or runway per the site plans when the sign is installed on the pad. If the sign legend location is not correct, then the panels must be removed and reinstalled in the sign in the correct location.

3.3.3 Sign Distance from Pavement Edge

Refer to ICAO Annex 14 for information on the location of different types of taxiway signs.

ICAO

Table 5-4 of ICAO Annex 14, Volume I should serve as a basis for determining the location of the guidance signs.

This table gives the perpendicular distance from defined taxiway / runway pavement edge to near side of sign.

Location

Exact location and orientation have to be determined on site, jointly by the contractor and the project management and finally approved by the Airport Authority (generally the Ground Traffic Control Manager).

Other Considerations

Unobstructed sign legibility and protection from direct exhaust blast are other considerations to be taken into account as well.

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3.3.4 Sign Installation on a Concrete Pad

NOTE: Follow site plans and specifications for concrete dimensions.

3.3.4.1 Concrete Pouring

See the site plans.

To pour a concrete pad, perform the following procedure:

1. Determine the sign size and overall length.
2. Pour your concrete pad according to the following requirements:

- A minimum of 30 inches (762 mm) wide, extending a minimum of 6 inches (152.4 mm) beyond the end of the supports. The sign pad needs to be flat and level in the area where the sign mounting flanges are located. The mounting floor flange is nominally 5.0 wide x 7.50 long and the area beyond the flange can be tapered to the outside edge of the concrete pad to provide for pad drainage.
- A minimum of 4 inches (101.6 mm) depth, extending below the frost line to prevent frost heave.
- Reinforce according to site plans and specifications.

3. Install a minimum of one 12-inch (304.8 mm) L-867B power base (1) according to the following guidelines:

- Install the base close to the sign in or near the concrete pad to provide easy access to the isolation transformer.

NOTE: When installing the base in the concrete pad, hold the L-867 base firmly in place during construction of the pad so that the upper surface of the base flange is level within ± 2 degrees and not more than 3/8 inch (9.525 mm) above the concrete surface.

- All other bearing surfaces on the pad for additional flange supports should be kept in the same horizontal plane as the L-867 base flange. The pad area where the sign mounting flanges will be located is to be flat **with no taper** to ensure that the sign will set level to prevent uneven loading on the frangible couplings.
- Refer to “Dimensions” on page 8 for the base dimensions and the base flange used for each sign.

Before the concrete sets, install two 1/2–13 anchor bolts into the concrete pad. The bolt hole centerline is on a 6-inch (152.4 mm) diameter bolt circle, 180 degrees apart as shown. Bolt slots are 0.62-inches wide x 1.0 long.
Overall width of flange is 5.0 inches (127 mm) and overall length is 7.5 inches (190.5 mm). Bolts should be located perpendicular to the sign face.

NOTE: A customer-supplied template is recommended to hold the bolts in position while the concrete sets. Anchor bolts (customer-supplied) must be a minimum of 1.25 inches (31.75 mm) above the top surface of the concrete pad to attach the mounting bases. Hilti Quick Bolts (wedge-bolt) or Red Head Trubolt Wedge Anchors or, equivalent are recommended for installing the flanges after the concrete sets (customer-supplied). Check with the manufacturer for their recommendations as applied to your airport site.

Example Hilti Kwik Bolt 3 Standard Thread 304 Stainless Steel

NOTE: With either anchoring system, the allowable load for any specific bolt is dependent upon several factors; type of concrete, depth of embedment, edge distance, anchor spacing, etc. ADB can advise the customer of various manufacturers of anchor bolts, but ADB cannot approve their specific installation.

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See “Mounting Detail” on page 12 for additional base flange dimension details.

Figure 13: Two-hole Signs Coupling, 62A2142

6-inch Diameter Bolt Circle

2.5″ - 8 NPT (tapered)

Flange Thickness: $^{7}/_{16}$″

Length: 7 $^{1}/_{2}$″

Width: 5 $^{1}/_{16}$″

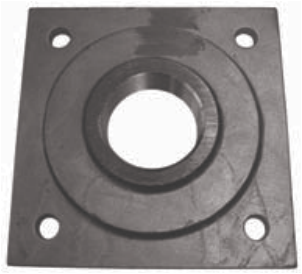
Figure 14: Four-hole Signs Coupling, 62A2146

5 $^{5}/_{8}$-inch Diameter Bolt Circle

2.5″ - 8 NPT (tapered)

Flange Thickness: $^{3}/_{8}$″

Dimensions: 7 $^{3}/_{4}$″ x 7 $^{3}/_{4}$″



3.3.5 Sign Mounting

NOTE: Signs are fully assembled at the factory and are ready for installation. Mounting flanges may be removed to lubricate the threads of the frangible coupling with anti-seize compound before installing the sign.

If the male L-823 connector is routed through a leg, slide the frangible coupling over the male connector and insert it into the female connector in the base plate, and then screw the frangible coupling into the base plate.

To mount the sign onto the concrete pad to insure the assembly is flat, perform the following procedure:

1. When the sign is ready to be bolted to the concrete pad set the sign assembly on the concrete pad and position the sign over the anchor bolts. Hand-tighten the bolts or nuts to fasten the mounting flanges to the concrete pad.
2. **To insure that the sign assembly is mounted flat on the concrete pad,** first loosen all three hex set screws found on each frangible coupling that are installed on the sign. See Figure 15. Once all the hex screws are loosened each of the sign legs will float free inside the frangible coupling that is screwed into the mounting flange Second, use a bubble, digital, or laser level to verify that the assembly is flat and level. Adjustments to make the assembly flat and level can be made by raising or lowering one end of the sign assembly to make the assembly flat and level.

   NOTE: Once the assembly is flat it may be necessary to block-up or hold the assembly in the flat position until all of the hex set screws can be re-tightened on each of the frangible couplings to secure the sign leg to the coupling. Once the sign is flat and level, finish tightening the mounting bolts to their correct torque value.

   If the sign pad is tapered in the area where the mounting flanges are located, shims may need to be placed under the mounting flanges to ensure that the coupling frangibility characteristics are the same for each coupling. If in doubt, contact the ADB Airfield Solutions Sales Department for further assistance.

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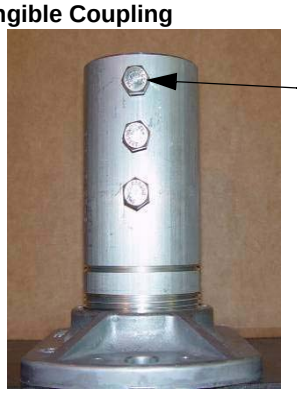
Figure 15: Sign Frangible Coupling



CAUTION

- Sign frangible couplings are uniquely designed for use on the sign size stamped on the coupling and can only be used for that particular size sign. If couplings must be replaced, make sure the sign size on the couplings matches the size sign on which they are to be installed.

3. Connect an AWG 12 (minimum) ground wire to the earth ground lug on the bottom of the sign.
   Refer to “Schematics” on page 47 for electrical connections on a series circuit installation.

CAUTION

- Lock out power before making any electrical connections. Failure to observe this warning may result in personal injury, death, or equipment damage.

4. Install optional tether. Refer to *Optional Tethers* in this section.
5. Plug the cord set into the sign and the transformer.
6. Reinstall panels (if removed) and top lid (if removed).

3.3.6 Wiring

Refer to “Schematics” on page 47 for wiring diagrams.

When installing cable, follow the guidelines below.

- Operate the signs as a part of a series lighting system. The signs are connected into the series circuit by means of an isolation transformer, see “Electrical Supply” on page 5. If installation is to be independent of other lighting circuits, use current edition of ICAO Annex 14 for additional guidance.

3.3.7 Earth Ground Lug

WARNING

- Signs must be properly grounded to true earth ground. Failure to observe this warning may result in personal injury, death, or equipment damage.

Attach the earth ground lug. The earth ground lug is located on the outside frame of the sign to permit easy connection of an AWG 12, (4.0 mm^2) (minimum) earth ground wire to the sign. If necessary, you may remove the ground lug from the outside and place it on the inside of the sign.

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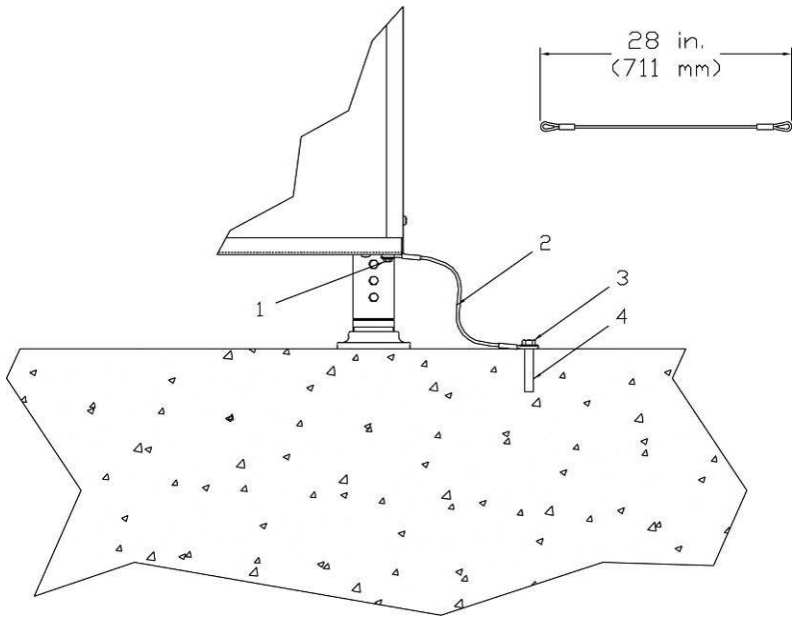
3.3.8 Optional Tethers

See Figure 16. Tethers are shipped installed on the sign according to the option specified on the sales order. Location and quantity of the tethers are determined when the sales order is placed.

NOTE: In the tether installation procedure below, the customer supplies the mounting hardware to attach one end of the tether to the concrete pad. The customer also supplies the expansion anchor for the bolt.

Figure 16: Installing Optional Tether



1. Existing 5/16-18 x ¾ in. Bolt
2. Tether
3. Mounting Hardware Attached to Expansion Anchor
4. Expansion Anchor for Bolt
5. To attach a tether, install the customer-supplied mounting hardware (3) to attach the tether to the expansion anchor (4) on the concrete pad.

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4.0 Maintenance and Repair

CAUTION

This equipment may contain electrostatic sensitive devices.

- Protect from electrostatic discharge.
- Electronic modules and components should be touched only when this is unavoidable e.g. soldering, replacement.
- Before touching any component of the cabinet you should bring your body to the same potential as the cabinet by touching a conductive earthed part of the cabinet.
- Electronic modules or components must not be brought in contact with highly insulating materials such as plastic sheets or, synthetic fiber clothing. They must be laid down on conductive surfaces.
- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.
- Do not replace components with the power on.

This section provides preventive maintenance for the ICAO LED signs.

To keep the taxiway and runway signs operating efficiently, follow a preventive maintenance schedule. Refer to Table 7.

Table 7: L-858 Taxiway and Runway Sign Maintenance

Interval	Maintenance Task	Action
Daily	Vissually check for burned-out LED assemblies.	Repair or replace the LED assemblies or the affected circuit component such as, the power supply PCB or the EMI filter assembly.
Monthly	Check for dirty panels or dust and dirt inside the sign.	Clean with mild soap and water.
	Check for vegetation covering panel.	Remove vegetation.
Semi-Annually	Check for loose wire connections.	Tighten wires.
	Check for cracked or deteriorated wires.	Replace wire.
Annually	Check for paint flaking off.	Repaint.
	Check for panels yellowing.	Clean with Formula 409 or similar cleaning agent capable of cleaing grease and dirt off of the panels.
	Check for deteriorated gaskets.	Replace gaskets.

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4.1 Replacing the Power Supply (800mm sign)

DANGER

Never replace a power supply with power applied to the board.

1. Remove the four #8-32 screws with lock washers installed in the PEM nuts of the power supply. Retain for future use. See Figure 17.
2. Apply thermal compound to the mating surface of the power supply to insure good heat transfer to the frame.
3. Locate the four threaded PEM nuts installed in the mounting bracket of the Power Supply and align the PEM nuts with the mating holes in the end panel of the sign.
4. Insert the four #8-32 screws with lock washers through the holes in the end panel and screw them into the PEM nuts. When tightening the screws, make sure the Power Supply is seated flat against the side of the sign.

CAUTION

- Be careful that the screws do not bind as you are tightening. This may give the impression that the power supply is firmly mounted when it is not!

4.1.1 Wiring the Power Supply (800mm Sign)

See “Schematics” on page 47.

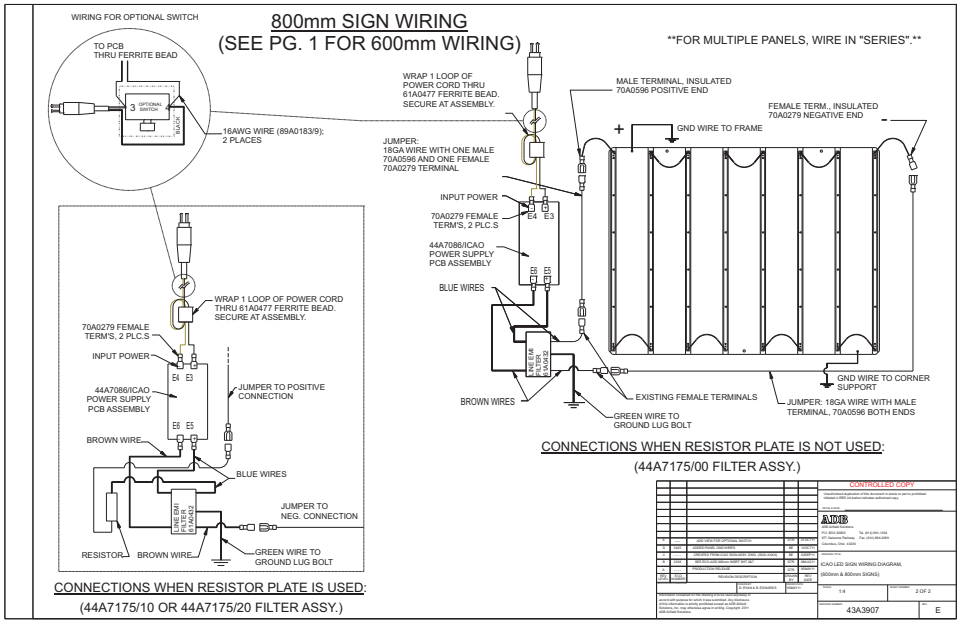
1. Locate the input power wires (from the L-830 secondary). Connect these wires to the Power Supply terminals labeled “AC INPUT”. This is the isolated 6.6A input. Polarity does not matter.
2. Locate the wires that connected the DC Supply to the LED panels. Connect these wires to the Power Supply terminals labeled “OUTPUT”.

NOTE: This is a DC current source, and **polarity does matter**.

3. Verify that the sign wiring matches the “Schematics” on page 47.
4. You are now ready to apply power to the sign.

Figure 17: The 800mm Sign, LED Power Supply (see 43A3907 page 2)

Sign Configuration picture shown with EMI filter and the resistor


800mm SIGN WIRING
(SEE PG. 1 FOR 600mm WIRING)
FOR MULTIPLE PANELS, WIRE IN "SERIES".
WIRING FOR OPTIONAL SWITCH
TO PCB THRU FERRITE BEAD
16AWG WIRE (89A0183/9); 2 PLACES
WRAP 1 LOOP OF POWER CORD THRU 61A0477 FERRITE BEAD. SECURE AT ASSEMBLY.
MALE TERMINAL, INSULATED 70A0596 POSITIVE END
FEMALE TERM., INSULATED 70A0279 NEGATIVE END
GND WIRE TO FRAME
JUMPER: 18GA WIRE WITH ONE MALE 70A0596 AND ONE FEMALE 70A0279 TERMINAL
INPUT POWER
70A0279 FEMALE TERM'S, 2 PLC.S
44A7086/ICAO POWER SUPPLY PCB ASSEMBLY
BLUE WIRES
BROWN WIRES
EXISTING FEMALE TERMINALS
GREEN WIRE TO GROUND LUG BOLT
GND WIRE TO CORNER SUPPORT
JUMPER: 18GA WIRE WITH MALE TERMINAL, 70A0596 BOTH ENDS
CONNECTIONS WHEN RESISTOR PLATE IS NOT USED:
(44A7175/00 FILTER ASSY.)
WRAP 1 LOOP OF POWER CORD THRU 61A0477 FERRITE BEAD. SECURE AT ASSEMBLY.
70A0279 FEMALE TERM'S, 2 PLC.S
INPUT POWER
44A7086/ICAO POWER SUPPLY PCB ASSEMBLY
JUMPER TO POSITIVE CONNECTION
BROWN WIRE
BLUE WIRES
JUMPER TO NEG. CONNECTION
RESISTOR
BROWN WIRE
GREEN WIRE TO GROUND LUG BOLT
CONNECTIONS WHEN RESISTOR PLATE IS USED:
(44A7175/10 OR 44A7175/20 FILTER ASSY.)
ADB
ICAO LED SIGN WIRING DIAGRAM,
(600mm & 800mm SIGNS)
43A3907
E

Sign Configuration shown with EMI filter without the resistor:

- 44A7175/20: SI8A-71S0110 and SI8B-71S0110
- 44A7175/10: SI8C-71S0110
- 44A7175/00: SI8D-71S0110 thru SI8P-71S0110

NOTE: The 600mm Sign, LED Power Supply (see 43A3907 page 1)

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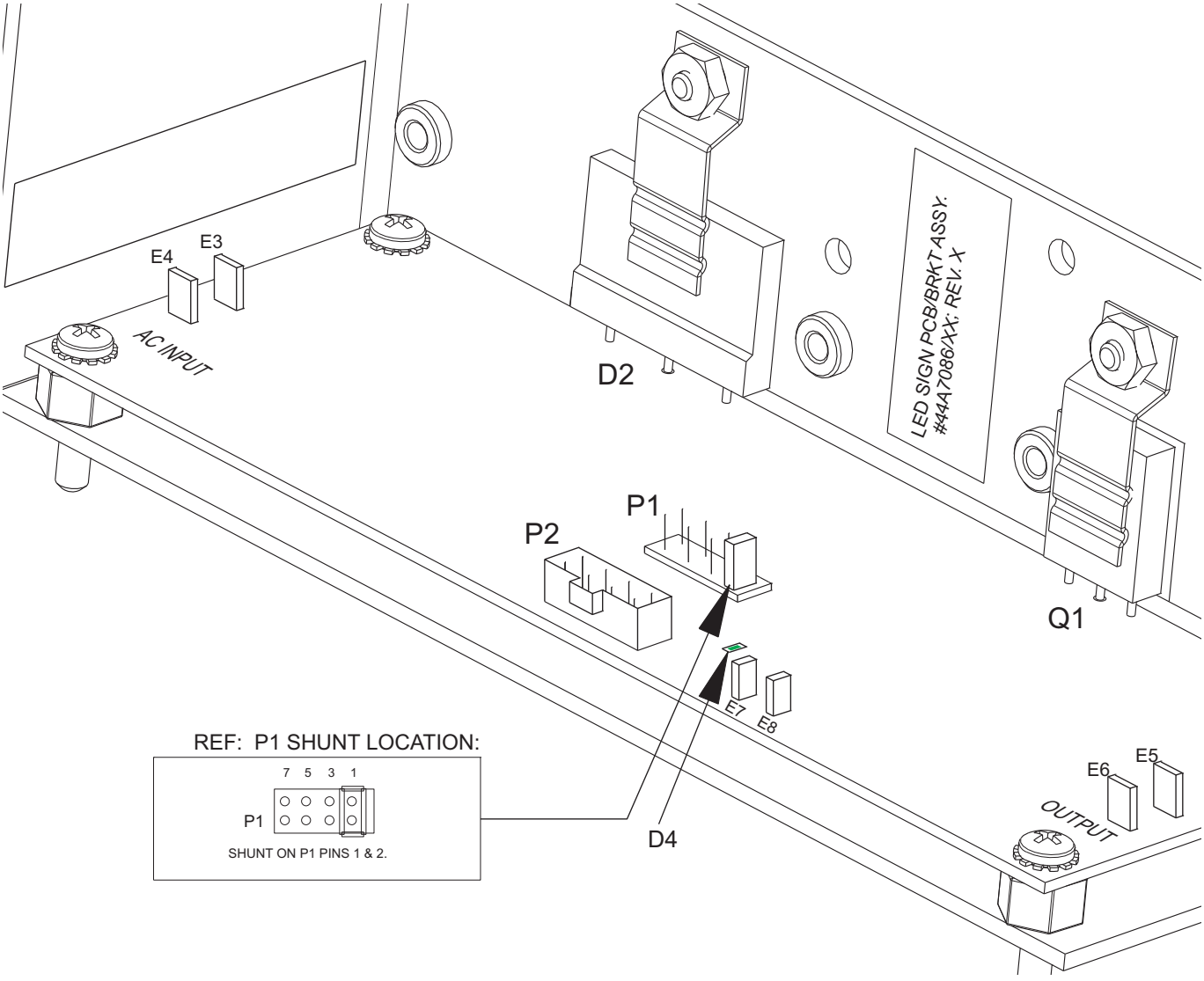
4.1.2 Checking the 800mm Sign Power Supply

When power is applied…

- All of the LED panels should illuminate and the onboard LED (D4) will stay off if all components are wired and functioning correctly.
- If the LED panels do not illuminate and the onboard LED (D4) comes on, there is an open in the output current loop to the LED panels. Remove the input power and check the output wiring for correct polarity and opens or shorts referring to “Schematics” on page 47.
- If the LED panels do not illuminate and the onboard LED (D4) does not illuminate, then there is a fault on the power supply board or incoming power. Remove the input power and check the input wiring for opens or shorts.
- Verify the P1 jumper is as shown.

Figure 18: 44A7086 Sign Power Supply Shunt Position



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4.2 Replacing the Power Supply (600mm sign)

DANGER

Never replace a power supply with power applied to the board.

1. Remove the four #8-32 nuts with lock washers of the power supply cover. Slide the cover down and remove. The cover will dangel until the wires are disconnected. Retain for future use.
2. Disconnect the wires.
3. Remove the old power supply by removing the four #8-32 screws with lock washers installed in the PEM nuts of the power supply. Retain for future use. See Figure 19.
4. Apply thermal compound to the mating surface of the power supply to insure good heat transfer to the frame.
5. Locate the four threaded PEM nuts installed in the mounting bracket of the Power Supply and align the PEM nuts with the mating holes in the end panel of the sign.
6. Insert the four #8-32 screws with lock washers through the holes in the end panel and screw them into the PEM nuts. When tightening the screws, make sure the Power Supply is seated flat against the side of the sign.

CAUTION

- Be careful that the screws do not bind as you are tightening. This may give the impression that the power supply is firmly mounted when it is not!

4.2.1 Wiring the Power Supply (600mm Sign)

See “Schematics” on page 47.

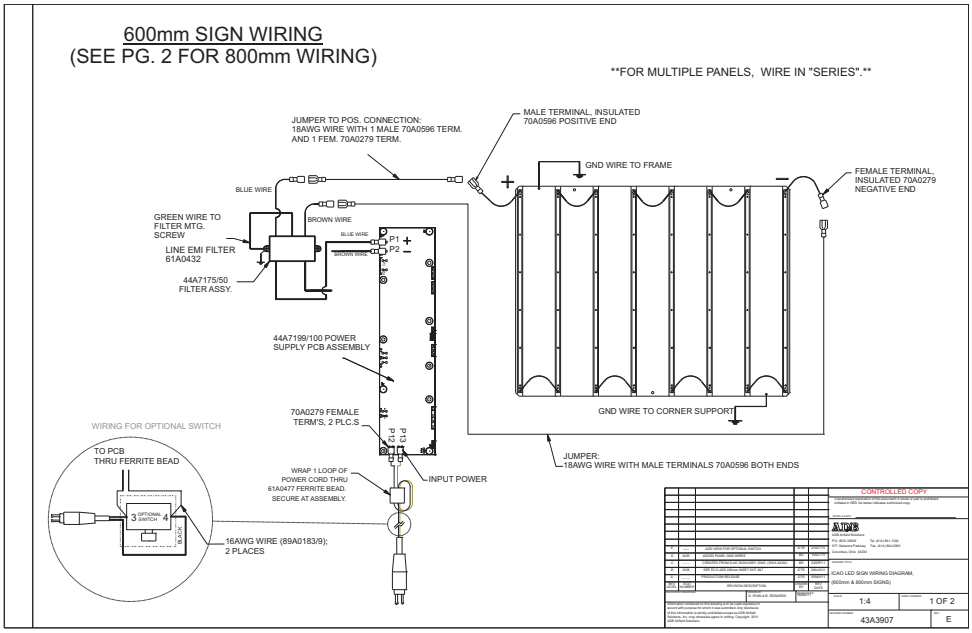
7. Locate the input power wires (from the L-830 secondary). Connect these wires to the Power Supply terminals labeled “AC INPUT”. This is the isolated 6.6A input. Polarity does not matter. They must go through the cover.
8. Locate the wires that connected the DC Supply to the LED panels. Connect these wires to the Power Supply terminals labeled “OUTPUT”. They must go through the cover.

NOTE: This is a DC current source, and **polarity does matter**.

9. Verify that the sign wiring matches the “Schematics” on page 47.
10. Attach the cover with the #8-32 nuts with lock washers removed in step #1.
11. You are now ready to apply power to the sign.

Sign Configuration picture shown with EMI filter above and the ferite bead below the power supply.

Figure 19: The 600mm Sign, LED Power Supply (see 43A3907 page 1)


600mm SIGN WIRING
(SEE PG. 2 FOR 800mm WIRING)
FOR MULTIPLE PANELS, WIRE IN "SERIES".
JUMPER TO POS. CONNECTION: 18AWG WIRE WITH 1 MALE 70A0596 TERM. AND 1 FEM. 70A0279 TERM.
MALE TERMINAL, INSULATED 70A0596 POSITIVE END
GND WIRE TO FRAME
FEMALE TERMINAL, INSULATED 70A0279 NEGATIVE END
BLUE WIRE
BROWN WIRE
GREEN WIRE TO FILTER MTG. SCREW
LINE EMI FILTER 61A0432
44A7175/50 FILTER ASSY.
44A7199/100 POWER SUPPLY PCB ASSEMBLY
70A0279 FEMALE TERM'S, 2 PLC.S
GND WIRE TO CORNER SUPPORT
JUMPER: 18AWG WIRE WITH MALE TERMINALS 70A0596 BOTH ENDS
WIRING FOR OPTIONAL SWITCH
TO PCB THRU FERRITE BEAD
WRAP 1 LOOP OF POWER CORD THRU 61A0477 FERRITE BEAD. SECURE AT ASSEMBLY.
INPUT POWER
16AWG WIRE (89A0183/9); 2 PLACES
CONTROLLED COPY
ADB
ICAO LED SIGN WIRING DIAGRAM, 600mm & 800mm SIGNS)
1:4
1 OF 2
43A3907
E

NOTE: The 800mm Sign, LED Power Supply (see 43A3907 page 2)

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4.2.2 Checking the 600mm Sign Power Supply

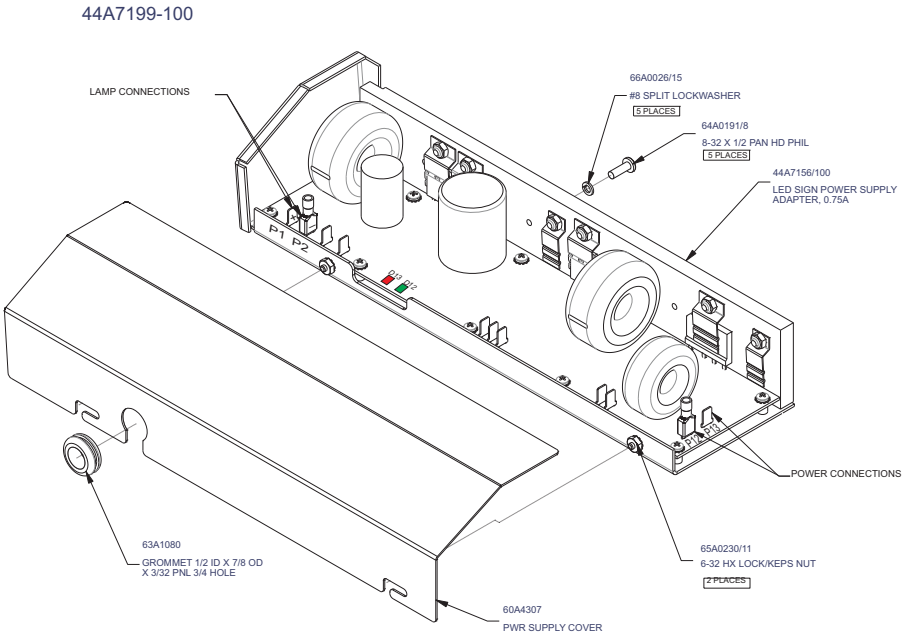
When power is applied…

- All of the LED panels should illuminate if all components are wired and functioning correctly.

  NOTE: When the power is first applied, the Red and Green LEDs will blink several times for about 10 seconds while the sign performs internal PCB self-checks. The sign may turn off and on also during this testing period. When the testing is done the (D13) red LED should be off and the (D12) green LED should blink about once per second.

- If the LED panels do not illuminate and the onboard Red LED (D13) comes on, there is an open in the output current loop to the LED panels. Remove the input power and check the output wiring for correct polarity and opens or shorts referring to “Schematics” on page 47.
- If the LED panels do not illuminate and the onboard Green LED (D12) does not flash at a 1 second rate (heartbeat), then there is a fault on the power supply board or incoming power. Remove the input power and check the input wiring for opens or shorts.
- Make certain you replace the cover after you are done checking the power supply.

Figure 20: 600mm Sign Power Supply with Cover Removed



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4.3 Troubleshooting

CAUTION

- Never connect an LED panel directly to the power supply. Always test an LED panel in the same configuration as the sign it is designed for.
See “Schematics” on page 47.

This section provides troubleshooting information for the taxiway and runway signs. The information covers only the most common problems. If you cannot solve the problem with the information given here, contact your local ADB Airfield Solutions representative for help.

Problem – LED Signs	Possible Cause	Corrective Action
(800mm sign) All LEDs are out or not functioning correctly.	Loose wires or connections	Tighten or replace wires.
	CCR circuit-shorted	Check circuit operation.
	Sign ON/OFF switch is closed.	Check the Sign ON/OFF switch for proper operation. Replace if necessary.
	Power Supply fault	See Figure 18. With field current on, measure the voltage at E7 with respect to E8, see Figure 18. E7 will be 10 VDC to 13 VDC on a properly operating power supply when powered. Next, the power supply can be checked for operation by performing the following: Remove input power, disconnect the output LED load at E6 and E5. Connect a DC volt meter from E8 to E5. Look for a rising voltage to approximately 195 VDC within the first few seconds of powering on the board. This voltage will then drop to less than 50 VDC and the onboard LED (D4) will light within a few seconds. If the voltage was between 50-195 VDC during the first few seconds of applying power, then the power supply is likely good. Note: the voltage at E8-E5 will cycle again about 40 seconds after dropping to less than 50 VDC and repeat five times and will stabilize. The input power must be cycled off for about 1 minute to get the output to cycle on again. Follow the correct polarity when reconnecting the LED panels.
	LED Light Panel fault	The power supply PCB LED (D4) will light green when there is an open in the output LED string. Swap out a known good LED assembly until the bad LED assembly is found. Follow correct polarity when connecting. **CAUTION:** Never connect a single LED panel directly to the power supply without the resistor! See the schematic for a single panel, one module sign if you want to test the panel that way.

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(600mm sign) All LEDs are out or not functioning correctly.	Power supply fault or CCR is not operating correctly	Remove the cover to observe the power supply board with two LEDs located near the notch where the wires enter the supply. LEDs are labeled D13 for Red and D12 for Green. When power is first applied, the green LED will flash (x-times) first, followed by the Red LED flashing (x-times) lasting about 10 seconds, followed by a regular green flashing "heartbeat" (at about a one blink per second rate). The initial x-times flash is for manufacturing purposes and may vary from board to board. When the regular green flashing "heartbeat" flashes, the red LED may flicker a couple of times until the circuit stabilizes but will extinguish quickly under normal operating conditions. If the green "heartbeat" is present and the red LED lights solidly, this indicates that the power supply is good but there is an open on the output of the power supply (likely either the interconnecting wires or the LED panels). If no status LEDs light or one or both lights solidly, and power is applied to the input, then the power supply is bad and needs replaced.
Light Panels are too bright or are dim.	Power supply fault or CCR is not operating correctly	Check the CCR's output current. Check the DC current to the LEDs by connecting a DC ammeter in series with LEDs. The current should be nominally 750mA after the 10 second self-check phase. Please note that the LEDs must be connected before powering up the CCR in order for LED current to flow.

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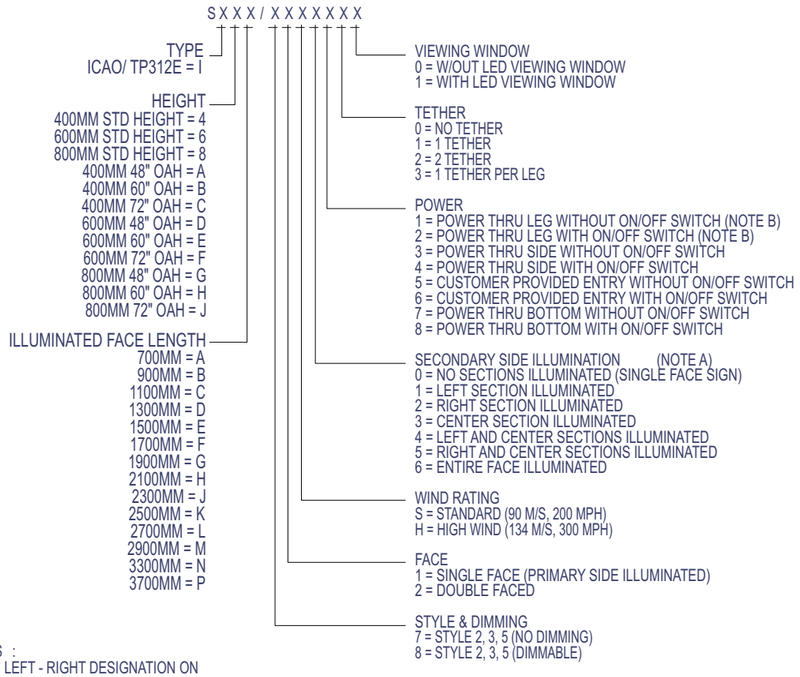
5.0 Parts

To order parts, call ADB Airfield Solutions Customer Service or your local ADB Airfield Solutions representative. Use this four-column parts list, and the accompanying illustration, to describe and locate parts correctly.

Figure 21: Parts and Ordering Codes


S X X X / X X X X X X X
TYPE
ICAO/ TP312E = I
HEIGHT
400MM STD HEIGHT = 4
600MM STD HEIGHT = 6
800MM STD HEIGHT = 8
400MM 48" OAH = A
400MM 60" OAH = B
400MM 72" OAH = C
600MM 48" OAH = D
600MM 60" OAH = E
600MM 72" OAH = F
800MM 48" OAH = G
800MM 60" OAH = H
800MM 72" OAH = J
ILLUMINATED FACE LENGTH
700MM = A
900MM = B
1100MM = C
1300MM = D
1500MM = E
1700MM = F
1900MM = G
2100MM = H
2300MM = J
2500MM = K
2700MM = L
2900MM = M
3300MM = N
3700MM = P
VIEWING WINDOW
0 = W/OUT LED VIEWING WINDOW
1 = WITH LED VIEWING WINDOW
TETHER
0 = NO TETHER
1 = 1 TETHER
2 = 2 TETHER
3 = 1 TETHER PER LEG
POWER
1 = POWER THRU LEG WITHOUT ON/OFF SWITCH (NOTE B)
2 = POWER THRU LEG WITH ON/OFF SWITCH (NOTE B)
3 = POWER THRU SIDE WITHOUT ON/OFF SWITCH
4 = POWER THRU SIDE WITH ON/OFF SWITCH
5 = CUSTOMER PROVIDED ENTRY WITHOUT ON/OFF SWITCH
6 = CUSTOMER PROVIDED ENTRY WITH ON/OFF SWITCH
7 = POWER THRU BOTTOM WITHOUT ON/OFF SWITCH
8 = POWER THRU BOTTOM WITH ON/OFF SWITCH
SECONDARY SIDE ILLUMINATION (NOTE A)
0 = NO SECTIONS ILLUMINATED (SINGLE FACE SIGN)
1 = LEFT SECTION ILLUMINATED
2 = RIGHT SECTION ILLUMINATED
3 = CENTER SECTION ILLUMINATED
4 = LEFT AND CENTER SECTIONS ILLUMINATED
5 = RIGHT AND CENTER SECTIONS ILLUMINATED
6 = ENTIRE FACE ILLUMINATED
WIND RATING
S = STANDARD (90 M/S, 200 MPH)
H = HIGH WIND (134 M/S, 300 MPH)
FACE
1 = SINGLE FACE (PRIMARY SIDE ILLUMINATED)
2 = DOUBLE FACED
STYLE & DIMMING
7 = STYLE 2, 3, 5 (NO DIMMING)
8 = STYLE 2, 3, 5 (DIMMABLE)

NOTES :
A. LEFT - RIGHT DESIGNATION ON SECONDARY SIDE ILLUMINATION DETERMINED BY LOOKING AT SECONDARY SIDE.
B. UNLESS OTHERWISE SPECIFIED, POWER THRU THE LEG WILL BE THRU THE LEFT LEG, LOOKING AT THE PRIMARY SIDE.

NOTES:
1. LEGEND PANELS ARE PER CUSTOMER SPECIFICATION. SEE LEGEND SHEET, SAS DOCUMENT #Q0088.
2. FOR ASSEMBLY WITH TETHER(S), REMOVE 5/16-18 X 3/4 HEX HEAD AND REPLACE WITH 94A0054 TETHER.
3. TORQUE ALL 5/16-18 BOLTS TO 115 ± 10 INCH-POUNDS. TORQUE ALL 3/8-16 BOLTS TO 200 ± 10 INCH-POUNDS.

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Figure 22: ICAO LED Sign Assembly Parts

ITEM NO.	PART NUMBER	DESCRIPTION	SI8A-71S0110	SI8B-71S0110	SI8C-71S0110	SI8C-72S0110	SI8D-71S0110	SI8E-71S0110	SI8F-71S0110	SI8G-71S0110	SI8H-71S0110	SI8J-71S0110	SI8K-71S0110	SI8L-71S0110	SI8M-71S0110	SI8N-71S0110	SI8P-71S0110
1	44A7086/ICAO	SIGN LED TUBE PS PCB ASSY W/MTG BRKT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	44A7144-29810	ICAO 2900mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2	44A7144-07810	ICAO 800mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	44A7144-09810	ICAO 900mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
2	44A7144-11810	ICAO 1100mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	1	-	-	-	-	-	-	-	-	-	=	3	1
2	44A7144-11820	ICAO 1100mm LED 2 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
2	44A7144-13810	ICAO 1300mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	1	-	-	-	-	-	-	-	=	-	2
2	44A7144-15810	ICAO 1500mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
2	44A7144-17810	ICAO 1700mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
2	44A7144-19810	ICAO 1900mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
2	44A7144-21810	ICAO 2100mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
2	44A7144-23810	ICAO 2300mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
2	44A7144-25810	ICAO 2500mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
2	44A7144-27810	ICAO 2700mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
3	44A7152-8S0	ICAO LED SIGN 800mm STD HT SIDE PANEL ASSY	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	44A7153/8S0	ICAO LED SIGN 800mm STD HT INTERMEDIATE SUPPORT ASSY - 1 SIDED	-	-	-	-	-	-	1	1	1	1	1	1	1	2	2
5	44A7157-807100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 700MM L	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-807200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 700MM L	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-809100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 900MM L	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-809200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 900MM L	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-811100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 1100MM L	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-811200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 1100MM L	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
5	44A7157-813100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 1300MM L	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
5	44A7157-813200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 1300MM L	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
5	44A7157-815100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 1500MM L	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
5	44A7157-815200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 1500MM L	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
5	44A7157-817100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 1700MM L	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
5	44A7157-817200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 1700MM L	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
5	44A7157-819100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 1900MM L	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
5	44A7157-819200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 1900MM L	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
5	44A7157-821100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2100MM L	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
5	44A7157-821200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 2100MM L	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
5	44A7157-823100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2300MM L	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
5	44A7157-823200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 2300MM L	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
5	44A7157-825100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2500MM L	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
5	44A7157-825200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 2500MM L	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
5	44A7157-827100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2700MM L	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
5	44A7157-827200	ICAO SIGN BLANK LEGEND PANEL ASSEMBLY 800MM H X 2700MM L	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
5	44A7157-829100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2900MM L	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
5	44A7157-829200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 2900MM L	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
5	44A7157-833100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 3300MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
5	44A7157-833200	ICAO SIGN BLANK LEGEND PANEL ASSEMBLY 800MM H X 3300MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
5	44A7157-837100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 3700MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
5	44A7157-837200	ICAO SIGN BLANK PANEL ASSEMBLY 800MM H X 3700MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
6	44A7175/00	ICAO SIGN FILTER ASSEMBLY; W/O RESISTOR	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1
6	44A7175/10	ICAO SIGN FILTER ASSEMBLY; 25W, 25 OHM RESISTOR	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
6	44A7175/20	ICAO SIGN FILTER ASSEMBLY; 50W, 50 OHM RESISTOR	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
6	44A7175/20	ICAO SIGN FILTER ASSEMBLY; 50W, 50 OHM RESISTOR	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
7	60A2678-20	SIGN FRANGIBLE FITTING -SIZE 2, STANDARD	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-
7	60A2678-21	SIGN FRANGIBLE FITTING -SIZE 2, HIGH WIND	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-
7	60A2678-30	SIGN FRANGIBLE FITTING -SIZE 3, STD, SIZE 1 HW	-	-	-	-	2	-	3	-	-	-	-	-	-	-	-
7	60A2678-40	SIGN FRANGIBLE FITTING -SIZE 4, STANDARD	-	-	-	-	-	2	-	3	-	-	-	-	-	-	-
7	60A2678-50	SIGN FRANGIBLE FITTING - IACO, STANDARD	-	-	-	-	-	-	-	-	-	-	-	3	3	4	4
7	60A2678/60	SIGN FRANGIBLE FITTING - IACO, 1000	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-0700	BOTTOM PANEL 700MM LG ICAO LED SIGN	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-0900	BOTTOM PANEL 900MM LG ICAO LED SIGN	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1100	BOTTOM PANEL 1100MM LG ICAO LED SIGN	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1300	BOTTOM PANEL 1300MM LG ICAO LED SIGN	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
8	60A4296-1500	BOTTOM PANEL 1500MM LG ICAO LED SIGN	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
8	60A4296-1700	BOTTOM PANEL 1700MM LG ICAO LED SIGN	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
8	60A4296-1900	BOTTOM PANEL 1900MM LG ICAO LED SIGN	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
8	60A4296-2100	BOTTOM PANEL 2100MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
8	60A4296-2300	BOTTOM PANEL 2300MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
8	60A4296-2500	BOTTOM PANEL 2500MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
8	60A4296-2700	BOTTOM PANEL 2700MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
8	60A4296-2900	BOTTOM PANEL 2900MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
8	60A4296-3300	BOTTOM PANEL 3300MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	=	1	-
8	60A4296-3700	BOTTOM PANEL 3700MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	=	-	1
9	60A4298-0700	ICAO LED SIGN TOP LID 700MM LG	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-0900	ICAO LED SIGN TOP LID 900MM LG	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1100	ICAO LED SIGN TOP LID 1100MM LG	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1300	ICAO LED SIGN TOP LID 1300MM LG	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
9	60A4298-1500	ICAO LED SIGN TOP LID 1500MM LG	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
9	60A4298-1700	ICAO LED SIGN TOP LID 1700MM LG	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
9	60A4298-1900	ICAO LED SIGN TOP LID 1900MM LG	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
9	60A4298-2100	ICAO LED SIGN TOP LID 2100MM LG	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
9	60A4298-2300	ICAO LED SIGN TOP LID 2300MM LG	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
9	60A4298-2500	ICAO LED SIGN TOP LID 2500MM LG	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
9	60A4298-2700	ICAO LED SIGN TOP LID 2700MM LG	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
9	60A4298-2900	ICAO LED SIGN TOP LID 2900MM LG	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
9	60A4298-3300	ICAO LED SIGN TOP LID 3300MM LG	-	-	-	-	-	-	-	-	-	-	-	-	=	1	-
9	60A4298-3700	ICAO LED SIGN TOP LID 3700MM LG	-	-	-	-	-	-	-	-	-	-	-	-	=	-	1
10	60A4299-07U0	ICAO LED SIGN 700MM TOP SUPPORT RAIL	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-09U0	ICAO LED SIGN 900MM TOP SUPPORT RAIL	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-11U0	ICAO LED SIGN 1100MM TOP SUPPORT RAIL	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-13U0	ICAO LED SIGN 1300MM TOP SUPPORT RAIL	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
10	60A4299-15U0	ICAO LED SIGN 1500MM TOP SUPPORT RAIL	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
10	60A4299-17U0	ICAO LED SIGN 1700MM TOP SUPPORT RAIL	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
10	60A4299-19U0	ICAO LED SIGN 1900MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
10	60A4299-21U0	ICAO LED SIGN 2100MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
10	60A4299-23U0	ICAO LED SIGN 2300MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
10	60A4299-25U0	ICAO LED SIGN 2500MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
10	60A4299-27U0	ICAO LED SIGN 2700MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
10	60A4299-29U0	ICAO LED SIGN 2900MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
10	60A4299-33U0	ICAO LED SIGN 3300MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	=	2	-
10	60A4299-37U0	ICAO LED SIGN 3700MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	=	-	2

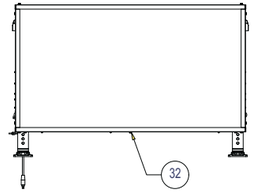
DESCRIPTION	PART NUMBER
WIRING DIAGRAM	43A3907
TEST PROCEDURE	103A0003

ITEM NO.	PART NUMBER	DESCRIPTION	SI8A-71S0110	SI8B-71S0110	SI8C-71S0110	SI8C-72S0110	SI8D-71S0110	SI8E-71S0110	SI8F-71S0110	SI8G-71S0110	SI8H-71S0110	SI8J-71S0110	SI8K-71S0110	SI8L-71S0110	SI8M-71S0110	SI8N-71S0110	SI8P-71S0110
11	60A4301-0	ICAO LED SIGN LED PANEL HANGER	3	3	3	3	3	3	6	6	6	6	6	6	6	9	9
12	60A4302-0	ICAO 800mm LED SIGN RAIL CROSS MEMBER	2	2	2	2	3	3	4	4	4	6	4	6	6	6	8
13	61A0415	1/4" PUSH MOUNT WIRE TIE	3	3	3	3	3	3	6	6	6	6	6	6	6	9	9
14	61A0477	FERRITE CORE Impedance:225ohm Ferrite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	62A2142	SIGN BASE	2	2	2	2	2	2	3	3	-	-	-	-	-	-	-
16	62A2146	HIGH WIND SIGN BASE	-	-	-	-	-	-	-	-	3	3	3	3	3	4	4
17	63A1015	LIQUID TIGHT KNOCKOUT SEAL	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
18	63A1065	1/4 PUSH TYPE HOLE PLUG BLACK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	63A1091	3/16 PUSH TYPE HOLE PLUG BLACK	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
20	64A0076-16	5/16-18 X 1 HEX HD	4	4	4	4	4	4	6	6	6	6	6	6	6	8	8
21	64A0076/12	5/16-18 X 3/4 HX BOLT	15	15	15	15	15	15	23	23	23	23	23	23	23	39	39
22	64A0173-12	1/4-20 X 3/4 HX HD	3	3	3	3	3	3	6	6	6	6	6	6	6	9	9
23	64A0173-24F	1/4-20 x 1& 1/2 HHCS FULL THREAD	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3
24	64A0173/16	1/4-20 X 1 HX HD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	64A0176-12	3/8-16 X 3/4 HX HD	2	2	2	2	2	2	4	4	4	4	4	4	4	6	6
26	64A0176/8	3/8-16 X 1/2 HHCS	6	6	6	6	6	6	9	9	9	9	9	9	9	12	12
27	64A0191/6	#8-32 X 3/8 PAN HD PHIL	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
28	65A0015/24	1/4-20 HX NUT, SS	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4
29	65A0533	POP RIVET, DOME HD, 3/16X1/8-1/4 GRP SS	4	4	4	4	6	6	8	8	8	12	8	12	12	12	16
30	66A0015/26	5/16 FLATWASHER	4	4	4	4	4	4	6	6	6	6	6	6	6	8	8
31	66A0026/15	#8 SPLIT LOCKWASHER	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
32	66A0026/24	1/4 SPLIT LOCKWASHER	5	5	5	5	5	5	9	9	9	9	9	9	9	13	13
33	66A0026/29	3/8 SPLIT LOCKWASHER	2	2	2	2	2	2	4	4	4	4	4	4	4	6	6
34	66A0259-6	#8 NYLON WASHER	4	4	4	4	4	4	6	6	6	6	6	6	6	8	8
35	70A0279	FEM DISC 22-18AWG .25X.03 INS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
36	72A0010	GROUND LUG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	73A0107-72	CORDSET, 16/2 FAA CL A, TYPE II STYLE 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	94A0054	L858 TETHER 3/16", 28" LG.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	94A0598	ICAO LED SIGN WIRE LEAD KIT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

S X X X / X X X X X X X
TYPE
ICAO/ TP312E = I
HEIGHT
400MM STD HEIGHT = 4
600MM STD HEIGHT = 6
800MM STD HEIGHT = 8
400MM 48° OAH = A
400MM 60° OAH = B
400MM 72° OAH = C
600MM 48° OAH = D
600MM 60° OAH = E
600MM 72° OAH = F
800MM 48° OAH = G
800MM 60° OAH = H
800MM 72° OAH = J
ILLUMINATED FACE LENGTH
700MM = A
900MM = B
1100MM = C
1300MM = D
1500MM = E
1700MM = F
1900MM = G
2100MM = H
2300MM = J
2500MM = K
2700MM = L
2900MM = M
3300MM = N
3700MM = P
VIEWING WINDOW
0 = W/OUT LED VIEWING WINDOW
1 = WITH LED VIEWING WINDOW
TETHER
0 = NO TETHER
1 = 1 TETHER
2 = 2 TETHER
3 = 1 TETHER PER LEG
POWER
1 = POWER THRU LEG WITHOUT ON/OFF SWITCH (NOTE B)
2 = POWER THRU LEG WITH ON/OFF SWITCH (NOTE B)
3 = POWER THRU SIDE WITHOUT ON/OFF SWITCH
4 = POWER THRU SIDE WITH ON/OFF SWITCH
5 = CUSTOMER PROVIDED ENTRY WITHOUT ON/OFF SWITCH
6 = CUSTOMER PROVIDED ENTRY WITH ON/OFF SWITCH
7 = POWER THRU BOTTOM WITHOUT ON/OFF SWITCH
8 = POWER THRU BOTTOM WITH ON/OFF SWITCH
SECONDARY SIDE ILLUMINATION (NOTE A)
0 = NO SECTIONS ILLUMINATED (SINGLE FACE SIGN)
1 = LEFT SECTION ILLUMINATED
2 = RIGHT SECTION ILLUMINATED
3 = CENTER SECTION ILLUMINATED
4 = LEFT AND CENTER SECTIONS ILLUMINATED
5 = RIGHT AND CENTER SECTIONS ILLUMINATED
6 = ENTIRE FACE ILLUMINATED
WIND RATING
S = STANDARD (90 M/S, 200 MPH)
H = HIGH WIND (134 M/S, 300 MPH)
FACE
1 = SINGLE FACE (PRIMARY SIDE ILLUMINATED)
2 = DOUBLE FACED
STYLE & DIMMING
7 = STYLE 2, 3, 5 (NO DIMMING)
8 = STYLE 2, 3, 5 (DIMMABLE)

NOTES :
A. LEFT - RIGHT DESIGNATION ON SECONDARY SIDE ILLUMINATION DETERMINED BY LOOKING AT SECONDARY SIDE.
B. UNLESS OTHERWISE SPECIFIED, POWER THRU THE LEG WILL BE THRU THE LEFT LEG, LOOKING AT THE PRIMARY SIDE.

NOTES:
1. LEGEND PANELS ARE PER CUSTOMER SPECIFICATION. SEE LEGEND SHEET, SAS DOCUMENT #Q0088.
2. FOR ASSEMBLY WITH TETHER(S), REMOVE 5/16-18 X 3/4 HEX HEAD AND REPLACE WITH 94A0054 TETHER.
3. TORQUE ALL 5/16-18 BOLTS TO 115 ± 10 INCH-POUNDS. TORQUE ALL 3/8-16 BOLTS TO 200 ± 10 INCH-POUNDS.



REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72S6XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	---	PRODUCTION RELEASE	DTR	05MAY11

PRODUCT OR SUBASSY: | DRAWN BY: D.T. RYAN | DRAWN DATE: 05MAY11

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INITIAL & DATE:

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Columbus, Ohio 43230

DRAWING TITLE: ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:1 | SHEET NUMBER: 1 OF 8

DRAWING NUMBER: SIXX-XXXXXX | REV: E

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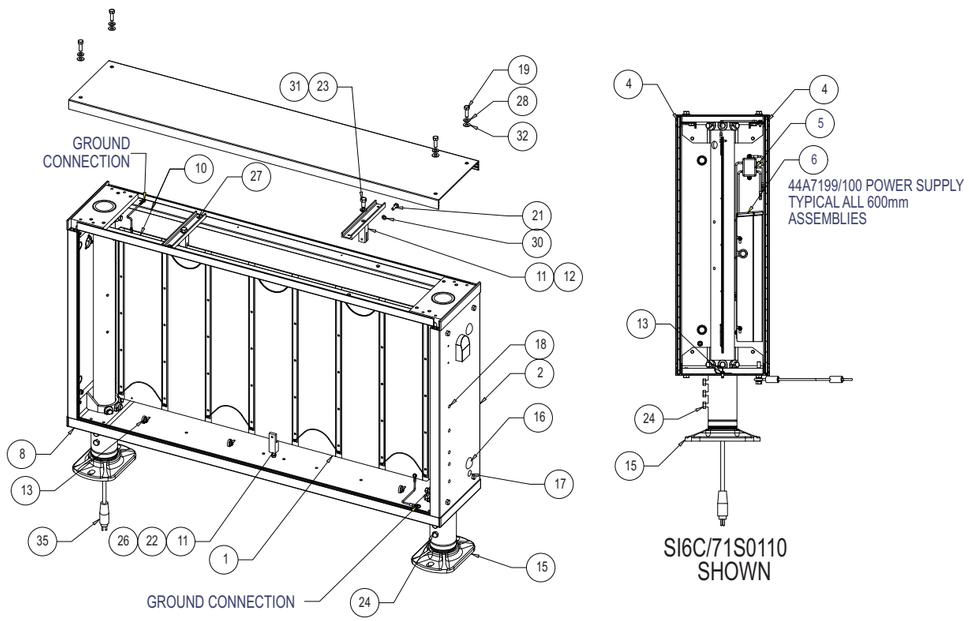
Figure 23: ICAO LED Sign Assemblies

ITEM NO.	PART NUMBER	DESCRIPTION	SI6A-71S0110	SI6B-71S0110	SI6C-71S0110	SI6D-71S0110	SI6E-71S0110	SI6E-72S0110	SI6F-71S0110	SI6G-71S0110	SI6H-71S0110	SI6H-72S0110	SI6J-71S0110	SI6K-71S0110	SI6L-71S0110	SI6M-71S0110	SI6M-72S0110	SI6N-71S0110	SI6P-71S0110
1	44A7144/07610	ICAO 600mm X 700MM LED 1 SIDE SIGN LIGHT ENGINE ASSY	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	44A7144/09610	ICAO 600mm X 900MM LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	44A7144/09610	ICAO 600mmX1100mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3	1
1	44A7144/13610	ICAO 600mmX1300mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
1	44A7144/15610	ICAO 600mmX1300mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
1	44A7144/15620	ICAO 600mmX1300mm LED 2 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
1	44A7144/17610	ICAO 600mmX1700mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
1	44A7144/19610	ICAO 600mmX1900mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
1	44A7144/21610	ICAO 600mmX2100mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
1	44A7144/21620	ICAO 600mmX2100mm LED 2 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
1	44A7144/23610	ICAO 600mmX2300mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
1	44A7144/25610	ICAO 600mmX2500mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
1	44A7144/27610	ICAO 600mmX2700mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
1	44A7144/29610	ICAO 600mmX2700mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
1	44A7144/29620	ICAO 600mmX2700mm LED 2 SIDE SIGN LIGHT ENGINE ASSY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2	44A7152-6S0	ICAO LED SIGN 600mm STD HT SIDE PANEL ASSY	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	44A7153/6S0	ICAO LED SIGN 600mm STD HT INTERMEDIATE SUPPORT ASSY	-	-	-	-	-	1	1	1	-	1	1	1	1	-	1	2	2
3	44A7153/6S2	ICAO LED SIGN 600mm STD HT INTRMDT SUPPORT ASSY 2 SIDED	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
4	44A7157-607100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 700MM L	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-607200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 700MM L	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-609100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 900MM L	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-609200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 900MM L	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-611100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1100MM L	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-611200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 1100MM L	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-613100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1300MM L	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-613200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 1300MM L	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-615100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1500MM L	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-615200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 1500MM L	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
4	44A7157-617100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1700MM L	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
4	44A7157-617200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 1700MM L	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
4	44A7157-619100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1900MM L	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
4	44A7157-619200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 1900MM L	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
4	44A7157-621100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 2100MM L	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-
4	44A7157-621200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 2100MM L	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
4	44A7157-623100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 2300MM L	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
4	44A7157-623200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 2300MM L	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
4	44A7157-625100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 2500MM L	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
4	44A7157-625200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 2500MM L	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
4	44A7157-627100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 2700MM L	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
4	44A7157-627200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 2700MM L	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
4	44A7157-629100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 2900MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-
4	44A7157-629200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 2900MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
4	44A7157-633100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 3300MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
4	44A7157-633200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 3300MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
4	44A7157-637100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 3700MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
4	44A7157-637200	ICAO SIGN BLANK PANEL ASSEMBLY 600MM H X 3700MM L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
5	44A7175/50	ICAO SIGN FILTER ASSEMBLY; W/O RESISTOR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	44A7199/100	LED SIGN PWR SUPPLY ADAPTER, 0.75A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	60A2678-10	SIGN FRANGIBLE FITTING -SIZE 1, STANDARD	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	60A2678-20	SIGN FRANGIBLE FITTING -SIZE 2, STANDARD	-	-	-	-	2	2	-	3	3	3	-	-	-	-	-	-	-
7	60A2678-30	SIGN FRANGIBLE FITTING -SIZE 3, STD, SIZE 1 HW	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	4	-
7	60A2678-40	SIGN FRANGIBLE FITTING -SIZE 4, STANDARD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
7	60A2678/60	SIGN FRANGIBLE FITTING - IACO, 1000	-	-	2	2	-	-	3	-	-	-	-	-	-	-	-	-	-
8	60A4296-0700	BOTTOM PANEL 700MM LG ICAO LED SIGN	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-0900	BOTTOM PANEL 900MM LG ICAO LED SIGN	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1100	BOTTOM PANEL 1100MM LG ICAO LED SIGN	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1300	BOTTOM PANEL 1300MM LG ICAO LED SIGN	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1500	BOTTOM PANEL 1500MM LG ICAO LED SIGN	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
8	60A4296-1700	BOTTOM PANEL 1700MM LG ICAO LED SIGN	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
8	60A4296-1900	BOTTOM PANEL 1900MM LG ICAO LED SIGN	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
8	60A4296-2100	BOTTOM PANEL 2100MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
8	60A4296-2300	BOTTOM PANEL 2300MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
8	60A4296-2500	BOTTOM PANEL 2500MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
8	60A4296-2700	BOTTOM PANEL 2700MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
8	60A4296-2900	BOTTOM PANEL 2900MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
8	60A4296-3300	BOTTOM PANEL 3300MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
8	60A4296-3700	BOTTOM PANEL 3700MM LG ICAO LED SIGN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
9	60A4298-0700	ICAO LED SIGN TOP LID 700MM LG	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-0900	ICAO LED SIGN TOP LID 900MM LG	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1100	ICAO LED SIGN TOP LID 1100MM LG	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1300	ICAO LED SIGN TOP LID 1300MM LG	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1500	ICAO LED SIGN TOP LID 1500MM LG	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
9	60A4298-1700	ICAO LED SIGN TOP LID 1700MM LG	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
9	60A4298-1900	ICAO LED SIGN TOP LID 1900MM LG	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
9	60A4298-2100	ICAO LED SIGN TOP LID 2100MM LG	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
9	60A4298-2300	ICAO LED SIGN TOP LID 2300MM LG	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
9	60A4298-2500	ICAO LED SIGN TOP LID 2500MM LG	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
9	60A4298-2700	ICAO LED SIGN TOP LID 2700MM LG	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
9	60A4298-2900	ICAO LED SIGN TOP LID 2900MM LG	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
9	60A4298-3300	ICAO LED SIGN TOP LID 3300MM LG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
9	60A4298-3700	ICAO LED SIGN TOP LID 3700MM LG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
10	60A4299-07U0	ICAO LED SIGN 700MM TOP SUPPORT RAIL	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-09U0	ICAO LED SIGN 900MM TOP SUPPORT RAIL	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-11U0	ICAO LED SIGN 1100MM TOP SUPPORT RAIL	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-13U0	ICAO LED SIGN 1300MM TOP SUPPORT RAIL	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-15U0	ICAO LED SIGN 1500MM TOP SUPPORT RAIL	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-
10	60A4299-17U0	ICAO LED SIGN 1700MM TOP SUPPORT RAIL	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
10	60A4299-19U0	ICAO LED SIGN 1900MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
10	60A4299-21U0	ICAO LED SIGN 2100MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-
10	60A4299-23U0	ICAO LED SIGN 2300MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
10	60A4299-25U0	ICAO LED SIGN 2500MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
10	60A4299-27U0	ICAO LED SIGN 2700MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
10	60A4299-29U0	ICAO LED SIGN 2900MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-
10	60A4299-33U0	ICAO LED SIGN 3300MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
10	60A4299-37U0	ICAO LED SIGN 3700MM TOP SUPPORT RAIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
11	60A4301-0	ICAO LED SIGN LED PANEL HANGER	3	3	3	3	3	3	9	6	6	6	6	6	6	6	6	9	9
12	60A4302-0	ICAO 800mm LED SIGN RAIL CROSS MEMBER	2	2	2	3	3	3	5	4	4	4	6	4	6	6	6	6	8
13	61A0415	1/4" PUSH MOUNT WIRE TIE	3	3	3	3	3	3	7	6	6	6	6	6	6	6	6	9	9
14	61A0477	FERRITE CORE Impedance:225ohm Ferrite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

ITEM NO.	PART NUMBER	DESCRIPTION	SI6A-71S0110	SI6B-71S0110	SI6C-71S0110	SI6D-71S0110	SI6E-71S0110	SI6E-72S0110	SI6F-71S0110	SI6G-71S0110	SI6H-71S0110	SI6H-72S0110	SI6J-71S0110	SI6K-71S0110	SI6L-71S0110	SI6M-71S0110	SI6M-72S0110	SI6N-71S0110	SI6P-71S0110
15	62A2142	SIGN BASE	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4
16	63A1015	LIQUID TIGHT KNOCKOUT SEAL	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
17	63A1065	1/4 PUSH TYPE HOLE PLUG BLACK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	63A1091	3/16 PUSH TYPE HOLE PLUG BLACK	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
19	64A0076-16	5/16-18 X 1 HEX HD	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6	8	8
20	64A0076/12	5/16-18 X 3/4 HX BOLT	15	15	15	15	15	15	23	23	23	23	23	23	23	23	23	39	39
21	64A0173-12	1/4-20 X 3/4 HX HD	4	4	4	4	4	4	8	7	7	7	7	7	7	7	7	10	10
22	64A0173-24F	1/4-20 x 1& 1/2 HHCS FULL THREAD	1	1	1	1	1	1	3	2	2	2	2	2	2	2	2	3	3
23	64A0176-12	3/8-16 X 3/4 HX HD	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6
24	64A0176/8	3/8-16 X 1/2 HHCS	6	6	6	6	6	6	9	9	9	9	9	9	9	9	9	12	12
25	64A0191/6	#8-32 X 3/8 PAN HD PHIL	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
26	65A0015/24	1/4-20 HX NUT, SS	2	2	2	2	2	2	4	3	3	3	3	3	3	3	3	4	4
27	65A0533	POP RIVET, DOME HD, 3/16X1/8-1/4 GRP SS	4	4	4	6	6	6	10	8	8	8	12	8	12	12	12	12	16
28	66A0015/26	5/16 FLATWASHER	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6	8	8
29	66A0026/15	#8 SPLIT LOCKWASHER	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
30	66A0026/24	1/4 SPLIT LOCKWASHER	5	5	5	5	5	5	11	9	9	9	9	9	9	9	9	13	13
31	66A0026/29	3/8 SPLIT LOCKWASHER	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6
32	66A0259-6	#8 NYLON WASHER	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6	8	8
33	70A0279	FEM DISC 22-18AWG .25X.03 INS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
34	72A0010	GROUND LUG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	73A0107-72	CORDSET, 16/2 FAA CL A, TYPE II STYLE 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	94A0054	L858 TETHER 3/16", 28" LG.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	94A0598	ICAO LED SIGN WIRE LEAD KIT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



E	3425	ADD SIXX/72S6XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11
REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE

PRODUCTION DRAWING: DRAWN BY: D.T. RYAN DRAWN DATE: 05MAY11

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977 Gahanna Parkway Fax. (614) 864-2069
Columbus, Ohio 43230

DRAWING TITLE: ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:6 SHEET NUMBER: 2 OF 8

DRAWING NUMBER: SIXX-XXXXXX REV: E

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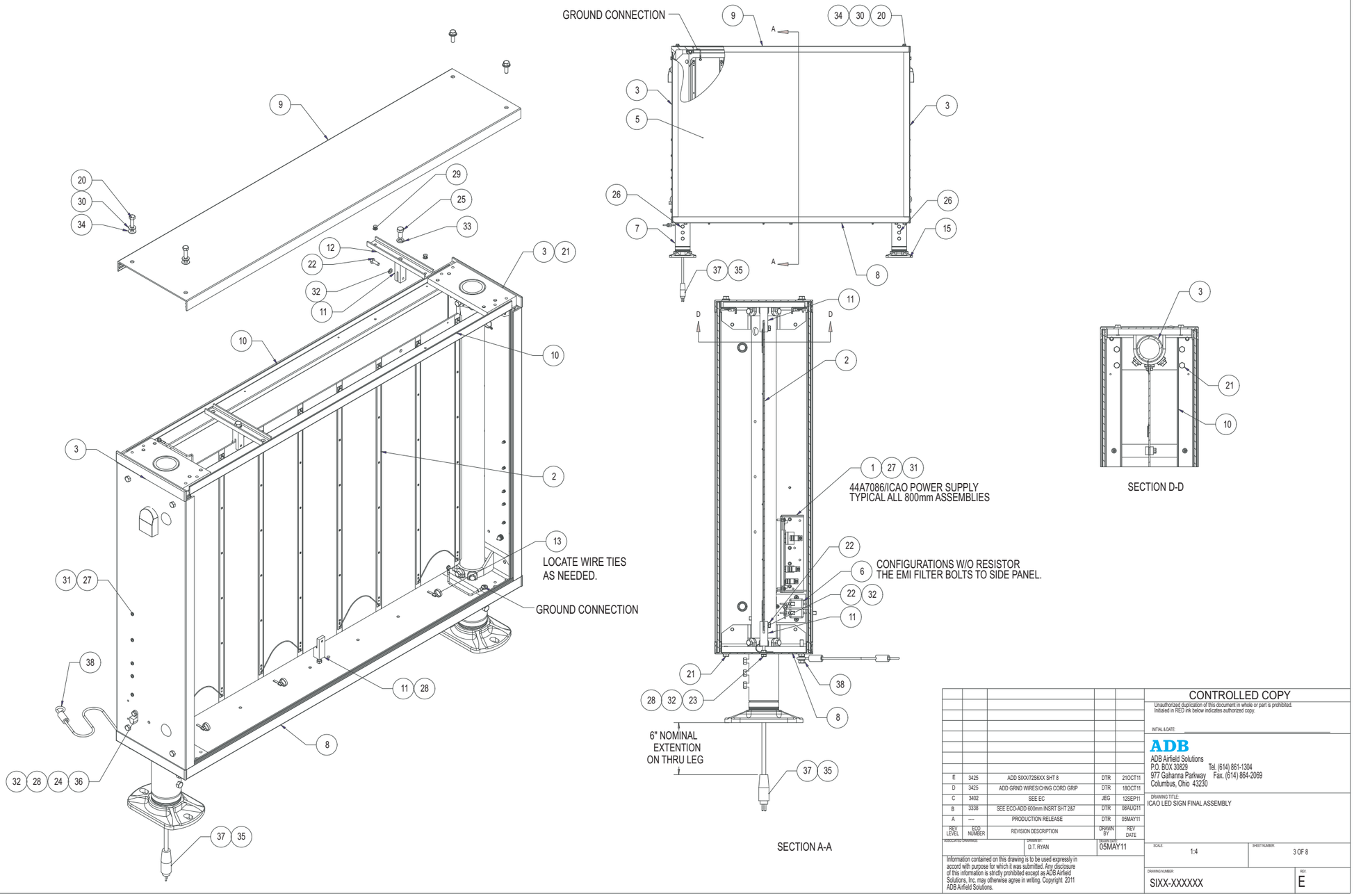
Figure 24: ICAO LED Sign Assemblies



REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72S6XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11

ASSOCIATED DRAWINGS:
DRAWN BY: D.T. RYAN
DRAWN DATE: 05MAY11

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DRAWING TITLE: ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:4
SHEET NUMBER: 3 OF 8
DRAWING NUMBER: SIXX-XXXXXX
REV: E

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Figure 25: ICAO LED Sign Assemblies

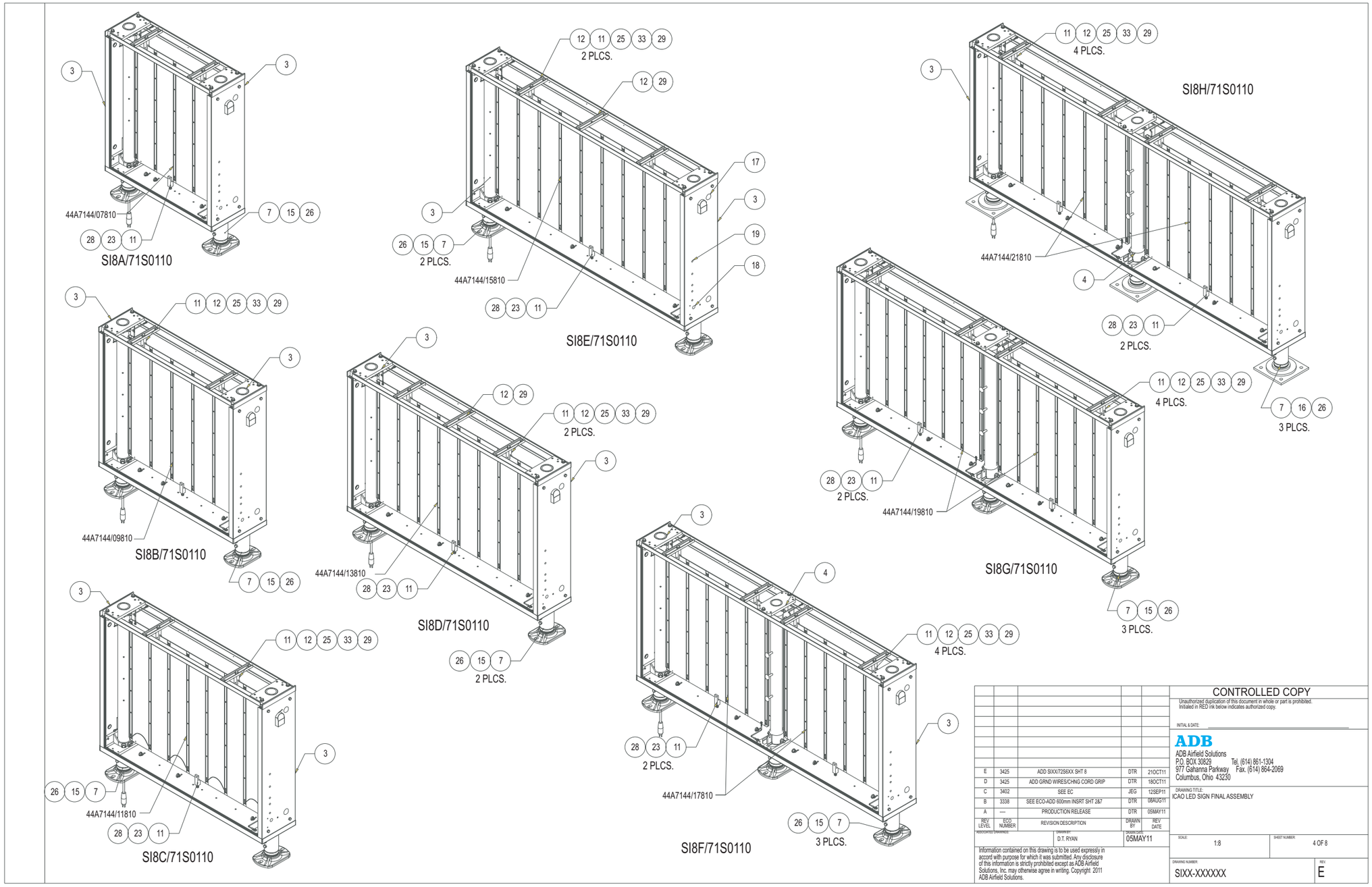

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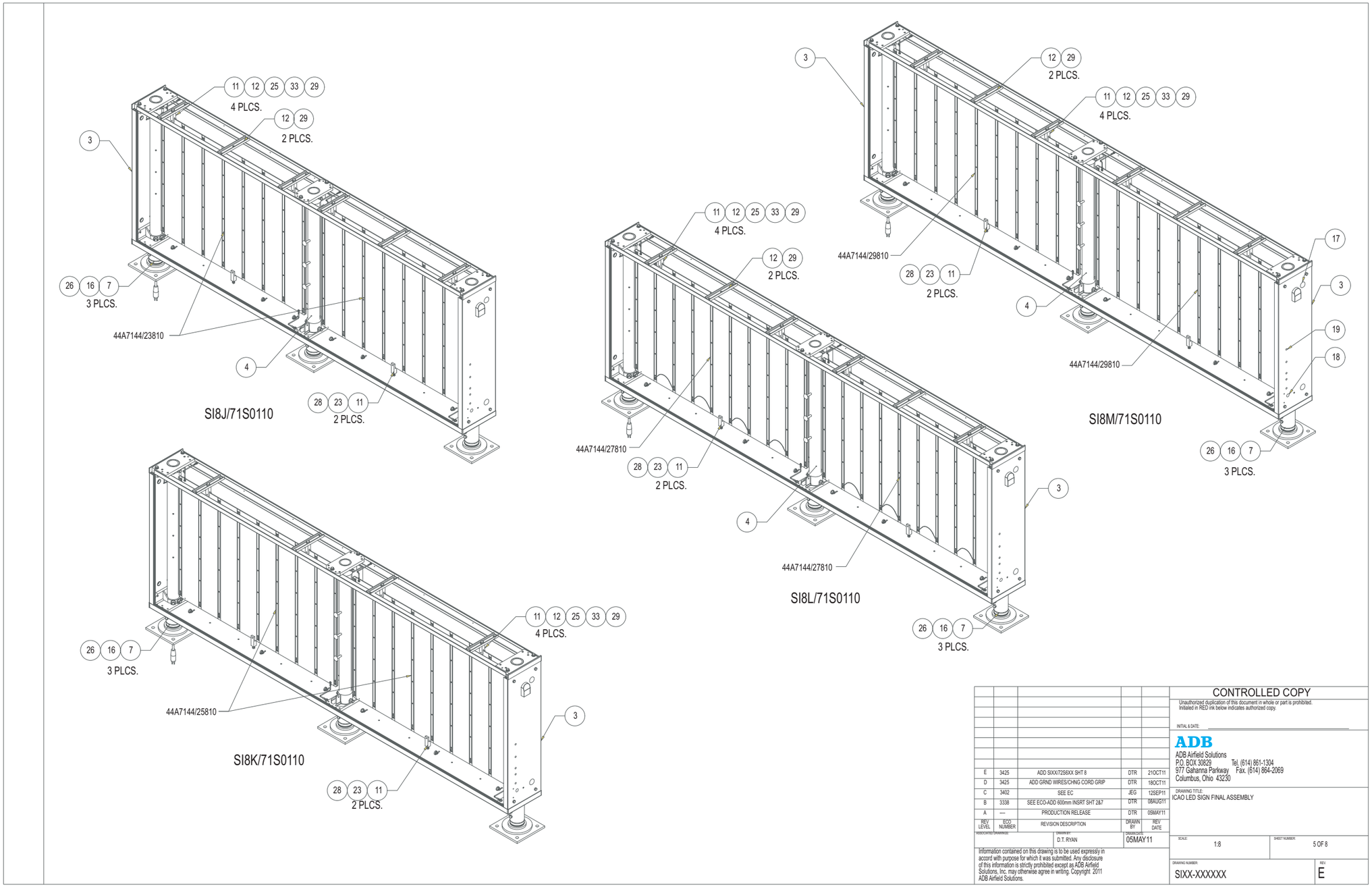
Figure 26: ICAO LED Sign Assemblies



REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72S6XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11

RESCINDED DRAWING:
DRAWN BY: D.T. RYAN
DRAWING DATE: 05MAY11

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Columbus, Ohio 43230

DRAWING TITLE: ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:8
SHEET NUMBER: 5 OF 8
DRAWING NUMBER: SIXX-XXXXXX
REV: E

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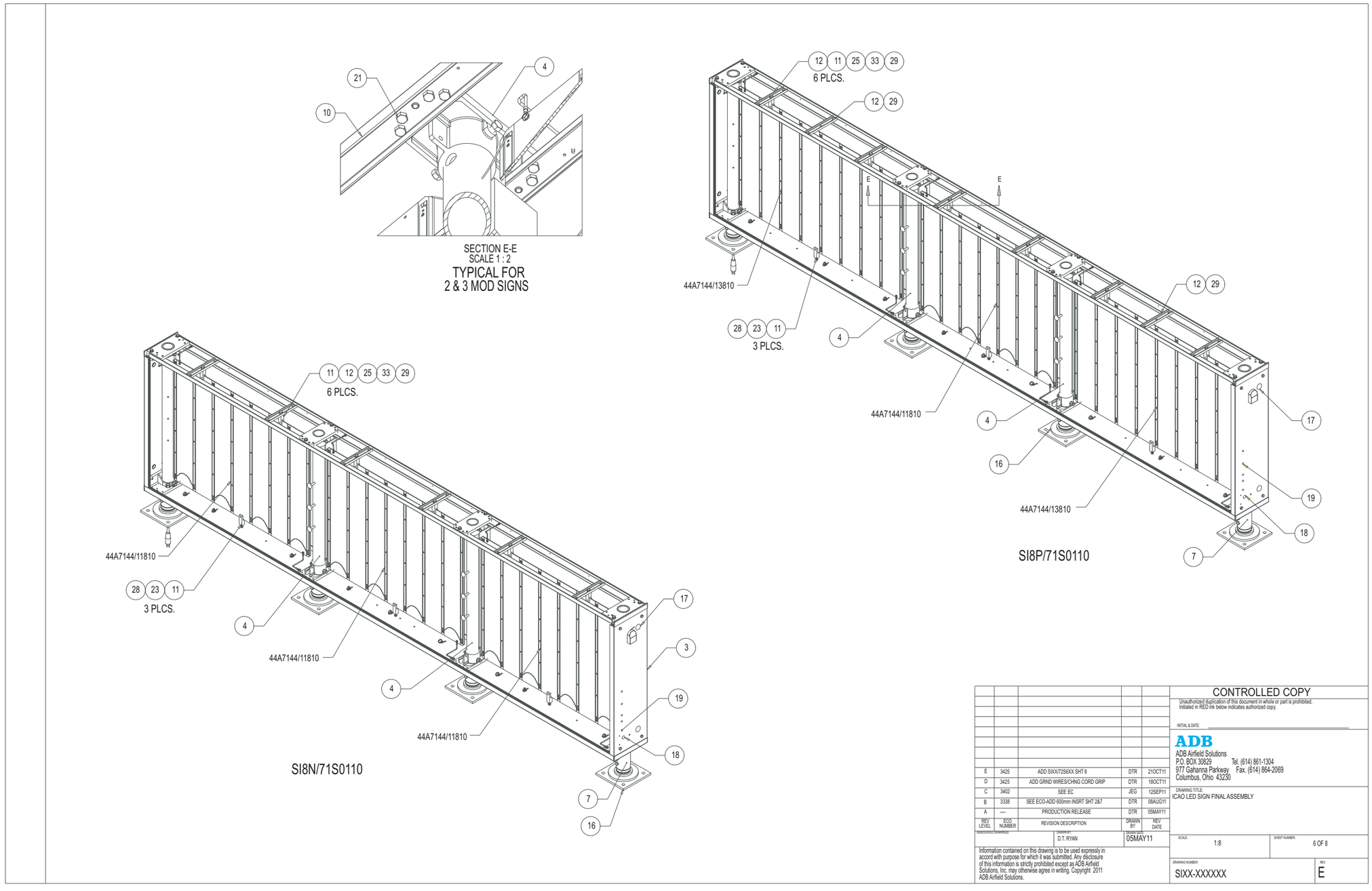
Figure 27:



REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72SKXX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11

ASSOCIATED DRAWINGS:

DRAWN BY: D.T. RYAN

DRAWN DATE: 05MAY11

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DRAWING TITLE:
ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:8

SHEET NUMBER: 6 OF 8

DRAWING NUMBER: SIXX-XXXXXX

REV: E

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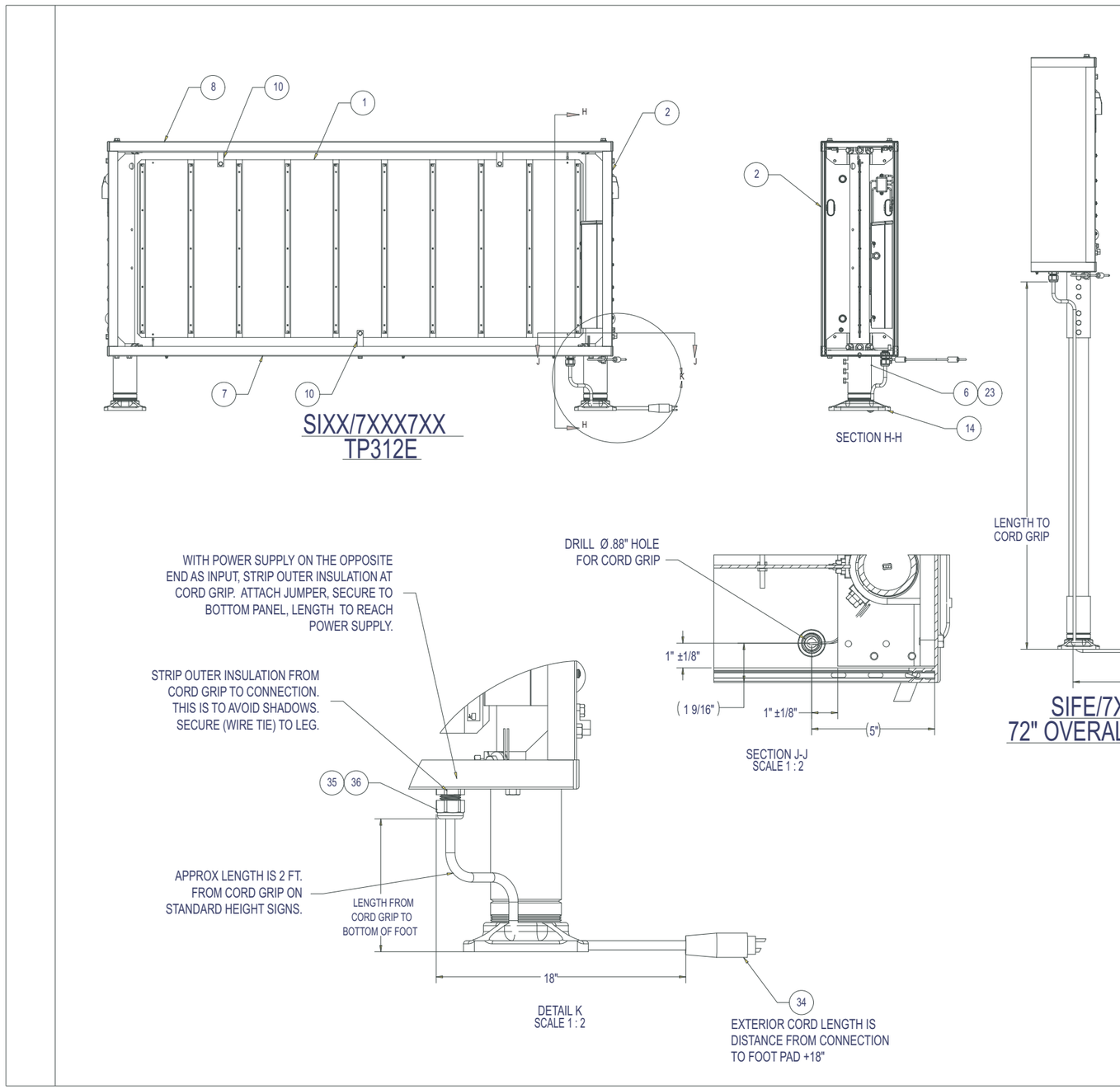
Figure 28:



ITEM NO.	PART NUMBER	DESCRIPTION	SIXX-72S0711	SIXX-72S0711	SIFE-72S0711	SIFE-72S0711
1	44A7144/15620	ICAO 600mmX1300mm LED 2 SIDE SIGN LIGHT ENGINE ASSY	1	1	1	1
2	44A7152-641	TP312 LED SIGN 600mm 48" HT SIDE PANEL ASSY	-	2	-	-
2	44A7152-661	TP312 LED SIGN 600mm 60" HT SIDE PANEL ASSY	-	-	2	-
2	44A7152-671	TP312 LED SIGN 600mm 72" HT SIDE PANEL ASSY	-	-	-	2
2	44A7152-6S1	TP312 LED SIGN 600mm STD HT SIDE PANEL ASSY	2	-	-	-
3	44A7157-615100	ICAO SIGN LEGEND PANEL ASSEMBLY 600MM H X 1500MM L	2	2	2	2
4	44A7175/50	ICAO SIGN FILTER ASSEMBLY; W/O RESISTOR	1	1	1	1
5	44A7199/100	LED SIGN PWR SUPPLY ADAPTER, 0.75A	1	1	1	1
6	60A2678-40	SIGN FRANGIBLE FITTING -SIZE 4, STANDARD	-	2	2	2
6	60A2678-20	SIGN FRANGIBLE FITTING -SIZE 2, STANDARD	2	-	-	-
7	60A4296-1500	BOTTOM PANEL 1500MM LG ICAO LED SIGN	1	1	1	1
8	60A4298-1500	ICAO LED SIGN TOP LID 1500MM LG	1	1	1	1
9	60A4299-15U0	ICAO LED SIGN 1500MM TOP SUPPORT RAIL	2	2	2	2
10	60A4301-0	ICAO LED SIGN LED PANEL HANGER	3	3	3	3
11	60A4302-0	ICAO 800mm LED SIGN RAIL CROSS MEMBER	3	3	3	3
12	61A0415	1/4" PUSH MOUNT WIRE TIE	3	3	3	3
13	61A0477	FERRITE CORE Impedance:225ohm Ferrite	1	1	1	1
14	62A2142	SIGN BASE	2	2	2	2
15	63A1015	LIQUID TIGHT KNOCKOUT SEAL	4	4	4	4
16	63A1065	1/4 PUSH TYPE HOLE PLUG BLACK	1	1	1	1
17	63A1091	3/16 PUSH TYPE HOLE PLUG BLACK	5	5	5	5
18	64A0076-16	5/16-18 X 1 HEX HD	4	4	4	4
19	64A0076/12	5/16-18 X 3/4 HX BOLT	15	15	15	15
20	64A0173-12	1/4-20 X 3/4 HX HD	4	4	4	4
21	64A0173-24F	1/4-20 x 1& 1/2 HHCS FULL THREAD	1	1	1	1
22	64A0176-12	3/8-16 X 3/4 HX HD	2	2	2	2
23	64A0176/8	3/8-16 X 1/2 HHCS	6	6	6	6
24	64A0191/6	#8-32 X 3/8 PAN HD PHIL	5	5	5	5
25	65A0015/24	1/4-20 HX NUT, SS	2	2	2	2
26	65A0533	POP RIVET, DOME HD, 3/16X1/8-1/4 GRP SS	6	6	6	6
27	66A0015/26	5/16 FLATWASHER	4	4	4	4
28	66A0026/15	#8 SPLIT LOCKWASHER	5	5	5	5
29	66A0026/24	1/4 SPLIT LOCKWASHER	5	5	5	5
30	66A0026/29	3/8 SPLIT LOCKWASHER	2	2	2	2
31	66A0259-6	#8 NYLON WASHER	4	4	4	4
32	70A0279	FEM DISC 22-18AWG .25X.03 INS	2	2	2	2
33	72A0010	GROUND LUG	1	1	1	1
34	73A0155/1.5	CORDSET, 12/2 TP312E CL A, TYPE II STYLE 1, 1.5M	1	1	-	-
34	73A0155/2.5	CORDSET, 12/2 TP312E CL A, TYPE II STYLE 1, 2.5M	-	-	1	1
35	77A0149	LOCKNUT 1/2" NPT	1	1	1	1
36	77A0156	COMPRESSION FITTING 1/2" NPT	1	1	1	1
37	94A0054	L858 TETHER 3/16", 28" LG.	1	1	1	1
38	94A0598	ICAO LED SIGN WIRE LEAD KIT	1	1	1	1

REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72S60XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11

ASSOCIATED DRAWINGS:
DRAWN BY: D.T. RYAN
DRAWN ON: 05AUG11

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Columbus, Ohio 43230

DRAWING TITLE:
ICAO LED SIGN FINAL ASSEMBLY

SCALE: 1:6
SHEET NUMBER: 7 OF 8
DRAWING NUMBER: SIXX-XXXXXX
REV: E

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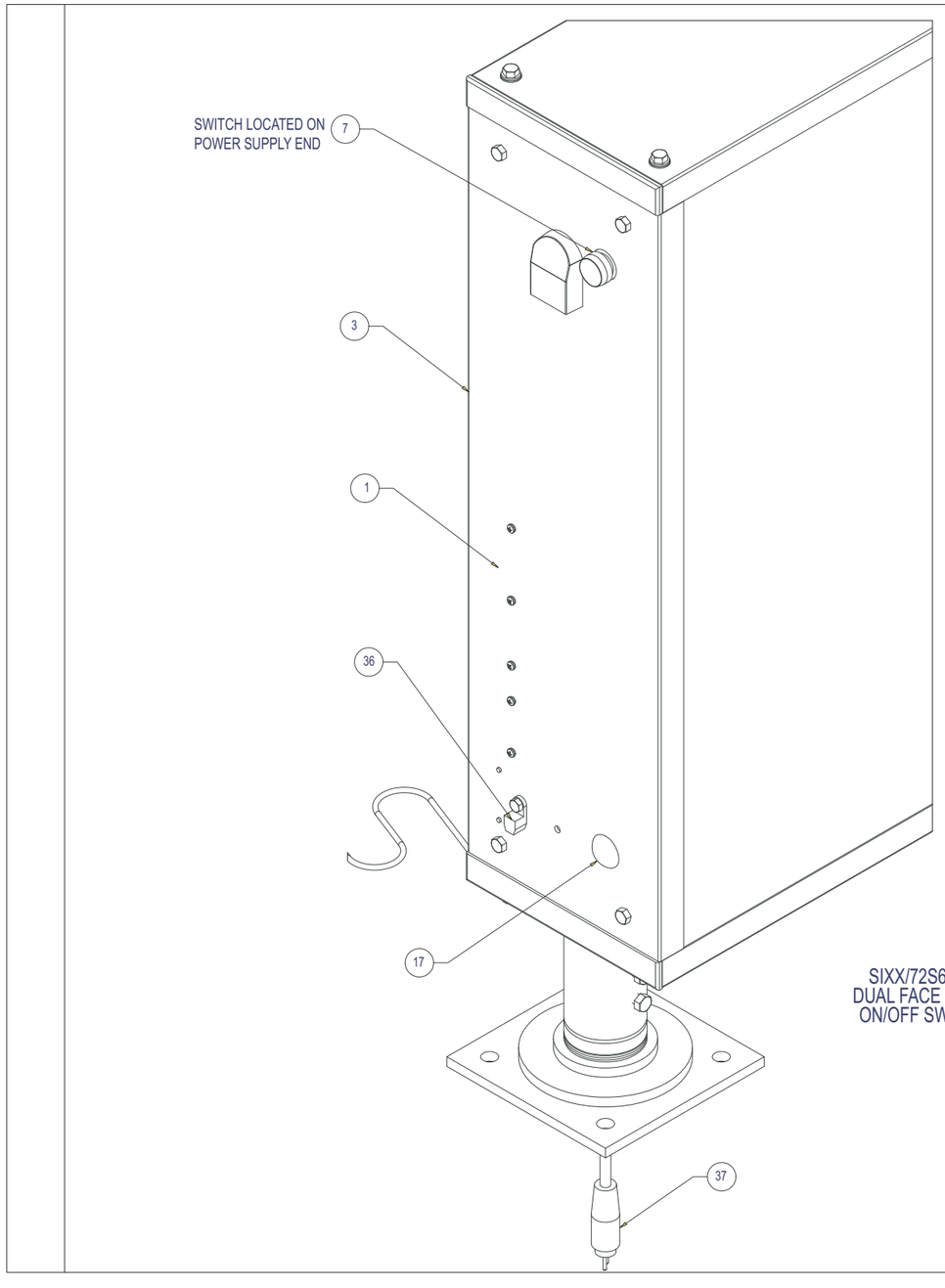
Figure 29:



SIXX/72S6210
DUAL FACE WITH
ON/OFF SWITCH

ITEM NO.	PART NUMBER	DESCRIPTION	SIBM-72S210	SIBN-72S210
1	44A7086/ICAO	SIGN LED TUBE PS PCB ASSY W/MTG BRKT	1	1
2	44A7144-11810	ICAO 1100mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	-	3
2	44A7144-29810	ICAO 2900mm LED 1 SIDE SIGN LIGHT ENGINE ASSY	2	-
3	44A7152-8S0	ICAO LED SIGN 800mm STD HT SIDE PANEL ASSY	2	2
4	44A7153/8S2	ICAO LED SIGN 800mm STD HT INTRMDT SUPPORT ASSY - 2 SIDED	1	2
5	44A7157-829100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 2900MM L	2	-
5	44A7157-833100	ICAO SIGN LEGEND PANEL ASSEMBLY 800MM H X 3300MM L	-	2
6	44A7175/00	ICAO SIGN FILTER ASSEMBLY; W/O RESISTOR	1	1
7	45A0456	SWITCH,PB,NC,10A,600VAC,MOMENTARY FLUSH	1	1
8	60A2678-50	SIGN FRANGIBLE FITTING - IACO, STANDARD	3	4
9	60A4296-2900	BOTTOM PANEL 2900MM LG ICAO LED SIGN	1	-
9	60A4296-3300	BOTTOM PANEL 3300MM LG ICAO LED SIGN	-	1
10	60A4298-2900	ICAO LED SIGN TOP LID 2900MM LG	1	-
10	60A4298-3300	ICAO LED SIGN TOP LID 3300MM LG	-	1
11	60A4299-29U0	ICAO LED SIGN 2900MM TOP SUPPORT RAIL	2	-
11	60A4299-33U0	ICAO LED SIGN 3300MM TOP SUPPORT RAIL	-	2
12	60A4301-0	ICAO LED SIGN LED PANEL HANGER	6	9
13	60A4302-0	ICAO 800mm LED SIGN RAIL CROSS MEMBER	6	6
14	61A0415	1/4" PUSH MOUNT WIRE TIE	6	9
15	61A0477	FERRITE CORE Impedance:225ohm Ferrite	1	1
16	62A2146	HIGH WIND SIGN BASE	3	4
17	63A1015	LIQUID TIGHT KNOCKOUT SEAL	3	3
18	63A1065	1/4 PUSH TYPE HOLE PLUG BLACK	1	1
19	63A1091	3/16 PUSH TYPE HOLE PLUG BLACK	5	5
20	64A0076-16	5/16-18 X 1 HEX HD	6	8
21	64A0076/12	5/16-18 X 3/4 HX BOLT	23	39
22	64A0173-12	1/4-20 X 3/4 HX HD	6	9
23	64A0173-24F	1/4-20 x 1& 1/2 HHCS FULL THREAD	2	3
24	64A0173/16	1/4-20 X 1 HX HD	1	1
25	64A0176-12	3/8-16 X 3/4 HX HD	4	6
26	64A0176/8	3/8-16 X 1/2 HHCS	9	12
27	64A0191/6	#8-32 X 3/8 PAN HD PHIL	5	5
28	65A0015/24	1/4-20 HX NUT, SS	3	4
29	65A0533	POP RIVET, DOME HD, 3/16X1/8-1/4 GRP SS	12	12
30	66A0015/26	5/16 FLATWASHER	6	8
31	66A0026/15	#8 SPLIT LOCKWASHER	5	5
32	66A0026/24	1/4 SPLIT LOCKWASHER	9	13
33	66A0026/29	3/8 SPLIT LOCKWASHER	4	6
34	66A0259-6	#8 NYLON WASHER	6	8
35	70A0279	FEM DISC 22-18AWG .25X.03 INS	2	2
36	72A0010	GROUND LUG	1	1
37	73A0107-72	CORDSET, 16/2 FAA CL A, TYPE II STYLE 1	1	1
38	94A0054	L858 TETHER 3/16", 28" LG.	1	1
39	94A0598	ICAO LED SIGN WIRE LEAD KIT	1	1

REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
E	3425	ADD SIXX/72S6XX SHT 8	DTR	21OCT11
D	3425	ADD GRND WIRES/CHNG CORD GRIP	DTR	18OCT11
C	3402	SEE EC	JEG	12SEP11
B	3338	SEE ECO-ADD 600mm INSRT SHT 2&7	DTR	08AUG11
A	----	PRODUCTION RELEASE	DTR	05MAY11

UNLESS OTHERWISE DESIGNATED | DRAWN BY: D.T. RYAN | DRAWN DATE: 05MAY11

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SCALE: 1:12 | SHEET NUMBER: 8 OF 8

DRAWING NUMBER: SIXX-XXXXXX | REV: E

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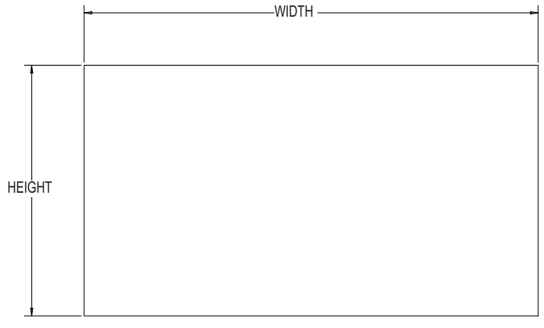
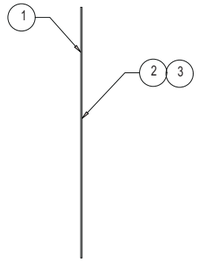
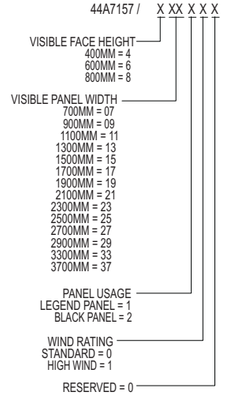
Figure 30: ICAO LED Sign Panel Assemblies

ITEM NO.	PART NUMBER	44A7157-807100/ QTY.	44A7157-807200/ QTY.	44A7157-809100/ QTY.	44A7157-809200/ QTY.	44A7157-811100/ QTY.	44A7157-811200/ QTY.	44A7157-813100/ QTY.	44A7157-813200/ QTY.	44A7157-815100/ QTY.	44A7157-815200/ QTY.	44A7157-817100/ QTY.	44A7157-817200/ QTY.	44A7157-819100/ QTY.	44A7157-819200/ QTY.	44A7157-821100/ QTY.	44A7157-821200/ QTY.
1	63A1150-80700	1	REF	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	63A1150-80900	-	-	1	REF	-	-	-	-	-	-	-	-	-	-	-	-
1	63A1150-81100	-	-	-	-	1	REF	-	-	-	-	-	-	-	-	-	-
1	63A1150-81300	-	-	-	-	-	-	1	REF	-	-	-	-	-	-	-	-
1	63A1150-81500	-	-	-	-	-	-	-	-	1	1REF	-	-	-	-	-	-
1	63A1150-81700	-	-	-	-	-	-	-	-	-	-	1	REF	-	-	-	-
1	63A1150-81900	-	-	-	-	-	-	-	-	-	-	-	-	1	REF	-	-
1	63A1150-82100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	REF
2	RM0584 SQ FT	9.2	-	11.8	-	14.5	-	17.1	-	19.7	-	22.3	-	25.0	-	27.6	-
3	RM0530 SQ FT	9.2	-	11.8	-	14.5	-	17.1	-	19.7	-	22.3	-	25.0	-	27.6	-

NOTES :
1. ALL /XXX2X0 BLACK PANEL ASSEMBLIES THAT SHOW QUANTITY AS "REF" IN THE BOM ARE TO BE PURCHASED ASSEMBLIES.
   MATERIAL: .177 THICK BLACK/WHITE AM50C SOLAR PLUS SENOSAN. PANEL HEIGHT/WIDTH DIMENSIONS ARE TO MATCH THE 63A1150/XXXXX PANEL NOTED AS "REF" IN THE BOM.







REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
B	---	PRODUCTION RELEASE	DLR	24MAY11
A	---	PRODUCTION RELEASE	DLR	29APR11

ASSOCIATED DRAWINGS: LEGEND PANEL ASSEMBLY
DRAWN BY: D RUFFINI
DRAWN DATE: 29APR11

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Columbus, Ohio 43230

DRAWING TITLE:
ICAO LED SIGN
LEGEND PANEL ASSEMBLY

SCALE: 1:16
SHEET NUMBER: 1 OF 2
DRAWING NUMBER: 44A7157-XXXXXX
REV: B

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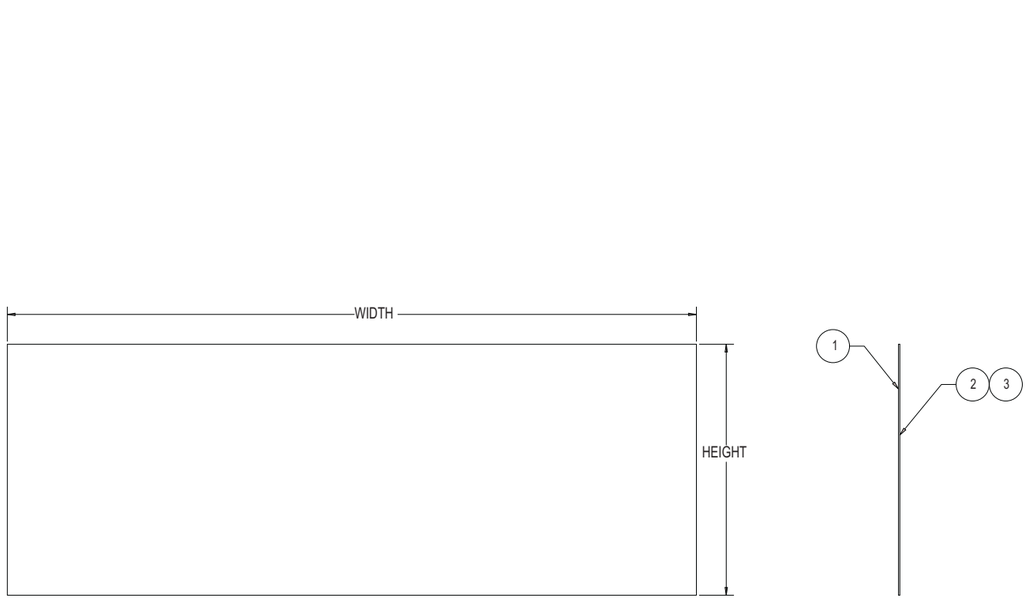
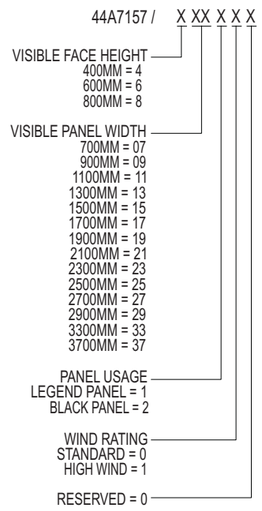
Figure 31: ICAO LED Sign Panel Assemblies

ITEM NO.	PART NUMBER	44A7157 -823100/ QTY.	44A7157 -823200/ QTY.	44A7157 -825100/ QTY.	44A7157 -825200/ QTY.	44A7157 -827100/ QTY.	44A7157 -827200/ QTY.	44A7157 -829100/ QTY.	44A7157 -829200/ QTY.	44A7157 -833100/ QTY.	44A7157 -833200/ QTY.	44A7157 -837100/ QTY.	44A7157 -837200/ QTY.
1	63A1150-82300	1	REF	-	-	-	-	-	-	-	-	-	-
1	63A1150-82500	-	-	1	REF	-	-	-	-	-	-	-	-
1	63A1150-82700	-	-	-	-	1	REF	-	-	-	-	-	-
1	63A1150-82900	-	-	-	-	-	-	1	REF	-	-	-	-
1	63A1150-83300	-	-	-	-	-	-	-	-	1	REF	-	-
1	63A1150-83700	-	-	-	-	-	-	-	-	-	-	1	REF
2	RM0584 SQ FT	30.2	-	32.8	-	35.4	-	38.1	-	43.3	-	48.6	-
3	RM0530 SQ FT	30.2	-	32.8	-	35.4	-	38.1	-	43.3	-	48.6	-





NOTES :
1. ALL /XXX2X0 BLACK PANEL ASSEMBLIES THAT SHOW QUANTITY AS "REF" IN THE BOM ARE TO BE PURCHASED ASSEMBLIES:
   MATERIAL: .177 THICK BLACK/WHITE AM50C SOLAR PLUS SENOSAN.
   PANEL HEIGHT/WIDTH DIMENSIONS ARE TO MATCH THE 63A1150/XXXXX PANEL NOTED AS "REF" IN THE BOM.

REV LEVEL	ECO NUMBER	REVISION DESCRIPTION	DRAWN BY	REV DATE
B	---	PRODUCTION RELEASE	DLR	24MAY11
A	---	PRODUCTION RELEASE	DLR	29APR11

DRAWING DESCRIPTION	DRAWN BY	DRAWING DATE
LEGEND PANEL ASSEMBLY	D RUFFINI	11FEB11

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977 Gahanna Parkway Fax. (614) 864-2069
Columbus, Ohio 43230

DRAWING TITLE:
ICAO LED SIGN
LEGEND PANEL ASSEMBLY

SCALE: 1:4 | SHEET NUMBER: 2 OF 2

DRAWING NUMBER: 44A7157-XXXXXX | REV: B

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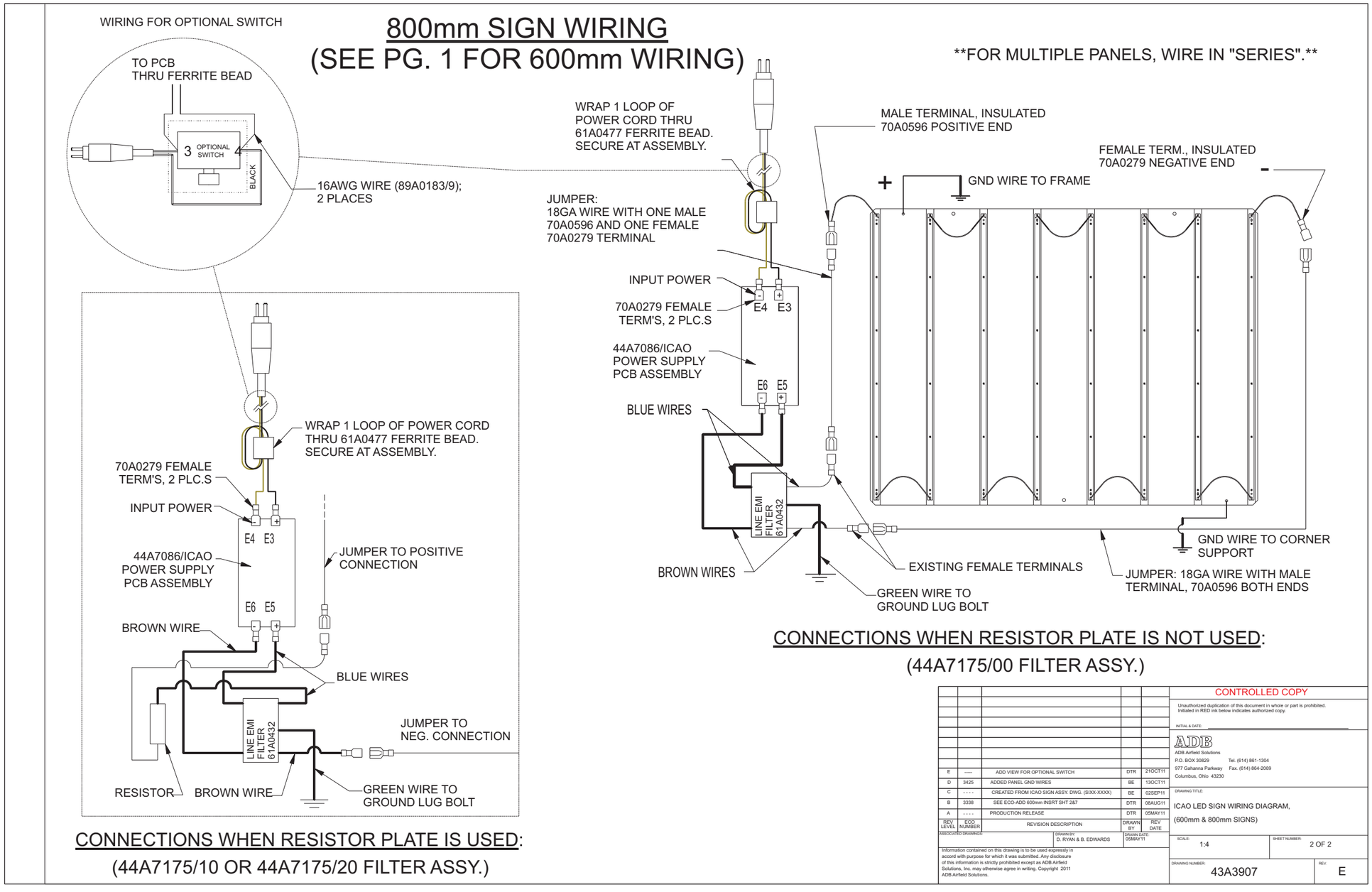
6.0 Schematics

Figure 32: The 800mm LED Sign Power Supply Schematic


800mm SIGN WIRING
(SEE PG. 1 FOR 600mm WIRING)
FOR MULTIPLE PANELS, WIRE IN "SERIES".
WIRING FOR OPTIONAL SWITCH
TO PCB
THRU FERRITE BEAD
3
OPTIONAL SWITCH
4
BLACK
16AWG WIRE (89A0183/9);
2 PLACES
WRAP 1 LOOP OF
POWER CORD THRU
61A0477 FERRITE BEAD.
SECURE AT ASSEMBLY.
JUMPER:
18GA WIRE WITH ONE MALE
70A0596 AND ONE FEMALE
70A0279 TERMINAL
INPUT POWER
70A0279 FEMALE
TERM'S, 2 PLC.S
E4 E3
44A7086/ICAO
POWER SUPPLY
PCB ASSEMBLY
E6 E5
BLUE WIRES
BROWN WIRE
LINE EMI
FILTER
61A0432
RESISTOR
JUMPER TO POSITIVE
CONNECTION
JUMPER TO
NEG. CONNECTION
GREEN WIRE TO
GROUND LUG BOLT
MALE TERMINAL, INSULATED
70A0596 POSITIVE END
FEMALE TERM., INSULATED
70A0279 NEGATIVE END
+
-
GND WIRE TO FRAME
GND WIRE TO CORNER
SUPPORT
EXISTING FEMALE TERMINALS
JUMPER: 18GA WIRE WITH MALE
TERMINAL, 70A0596 BOTH ENDS
CONNECTIONS WHEN RESISTOR PLATE IS USED:
(44A7175/10 OR 44A7175/20 FILTER ASSY.)
CONNECTIONS WHEN RESISTOR PLATE IS NOT USED:
(44A7175/00 FILTER ASSY.)
E ---- ADD VIEW FOR OPTIONAL SWITCH DTR 21OCT11
D 3425 ADDED PANEL GND WIRES BE 13OCT11
C - - - - CREATED FROM ICAO SIGN ASSY. DWG. (SIXX-XXXX) BE 02SEP11
B 3338 SEE ECO-ADD 600mm INSRT SHT 2&7 DTR 08AUG11
A - - - - PRODUCTION RELEASE DTR 05MAY11
REV LEVEL | ECO NUMBER | REVISION DESCRIPTION | DRAWN BY | REV DATE
ASSOCIATED DRAWINGS:
DRAWN BY: D. RYAN & B. EDWARDS
DRAWN DATE: 05MAY11
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Columbus, Ohio 43230
DRAWING TITLE:
ICAO LED SIGN WIRING DIAGRAM,
(600mm & 800mm SIGNS)
SCALE: 1:4
SHEET NUMBER: 2 OF 2
DRAWING NUMBER: 43A3907
REV: E

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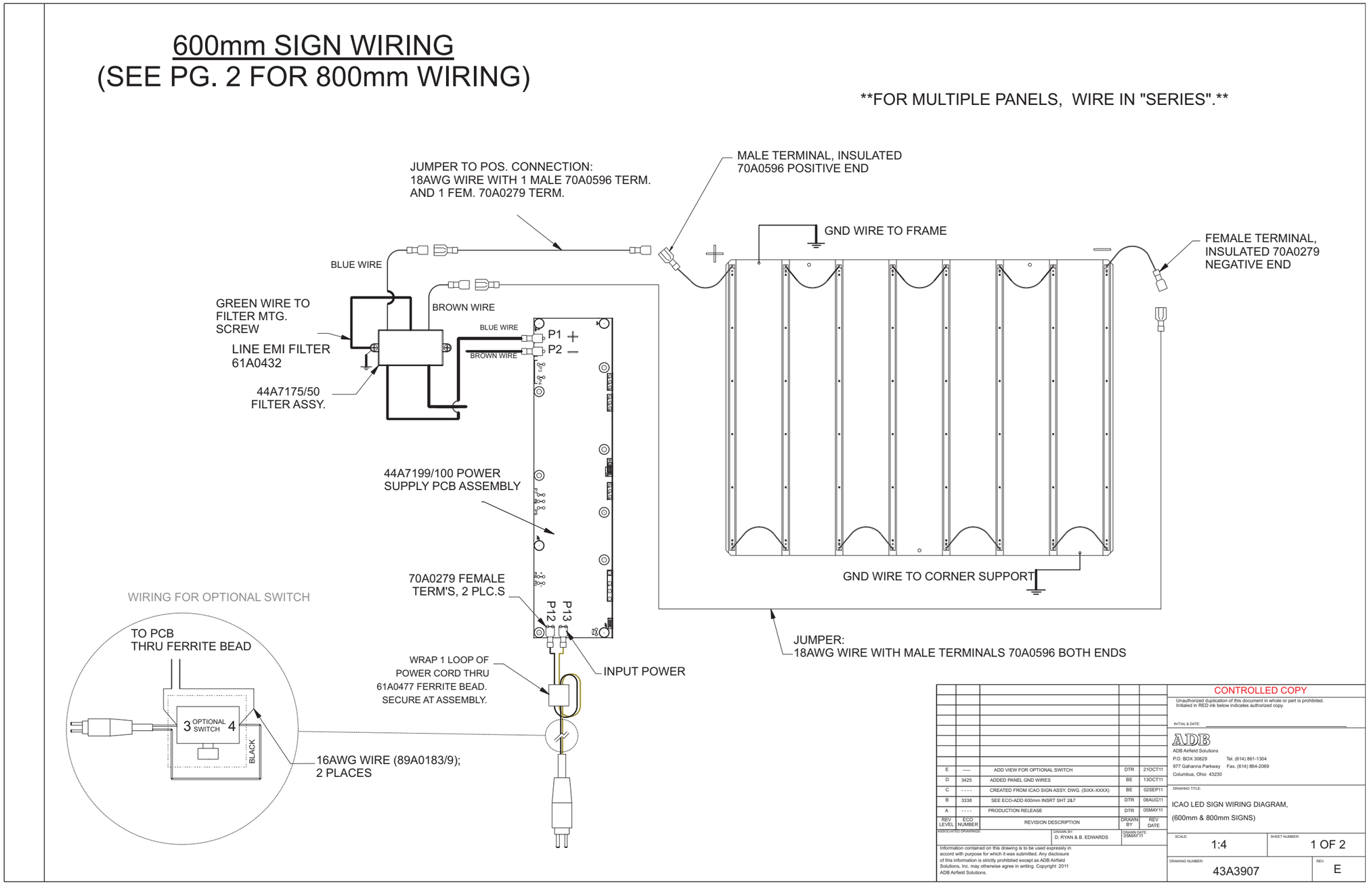
Figure 33: 600mm LED Sign Power Supply Schematic


600mm SIGN WIRING
(SEE PG. 2 FOR 800mm WIRING)
FOR MULTIPLE PANELS, WIRE IN "SERIES".
JUMPER TO POS. CONNECTION:
18AWG WIRE WITH 1 MALE 70A0596 TERM.
AND 1 FEM. 70A0279 TERM.
MALE TERMINAL, INSULATED
70A0596 POSITIVE END
GND WIRE TO FRAME
FEMALE TERMINAL,
INSULATED 70A0279
NEGATIVE END
BLUE WIRE
BROWN WIRE
GREEN WIRE TO
FILTER MTG.
SCREW
LINE EMI FILTER
61A0432
44A7175/50
FILTER ASSY.
BLUE WIRE
BROWN WIRE
P1
P2
44A7199/100 POWER
SUPPLY PCB ASSEMBLY
70A0279 FEMALE
TERM'S, 2 PLC.S
P13
P12
WRAP 1 LOOP OF
POWER CORD THRU
61A0477 FERRITE BEAD.
SECURE AT ASSEMBLY.
INPUT POWER
GND WIRE TO CORNER SUPPORT
JUMPER:
18AWG WIRE WITH MALE TERMINALS 70A0596 BOTH ENDS
WIRING FOR OPTIONAL SWITCH
TO PCB
THRU FERRITE BEAD
3
OPTIONAL
SWITCH
4
BLACK
16AWG WIRE (89A0183/9);
2 PLACES
E ---- ADD VIEW FOR OPTIONAL SWITCH DTR 21OCT11
D 3425 ADDED PANEL GND WIRES BE 13OCT11
C ---- CREATED FROM ICAO SIGN ASSY. DWG. (SIXX-XXXX) BE 02SEP11
B 3338 SEE ECO-ADD 600mm INSRT SHT 2&7 DTR 08AUG11
A ---- PRODUCTION RELEASE DTR 05MAY11
REV LEVEL | ECO NUMBER | REVISION DESCRIPTION | DRAWN BY | REV DATE
ASSOCIATED DRAWINGS:
DRAWN BY: D. RYAN & B. EDWARDS
DRAWN DATE: 05MAY11
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DRAWING TITLE:
ICAO LED SIGN WIRING DIAGRAM,
(600mm & 800mm SIGNS)
SCALE: 1:4
SHEET NUMBER: 1 OF 2
DRAWING NUMBER: 43A3907
REV: E

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6.1 Dimension Diagrams for Installation

Figure 34: 600 mm Signs

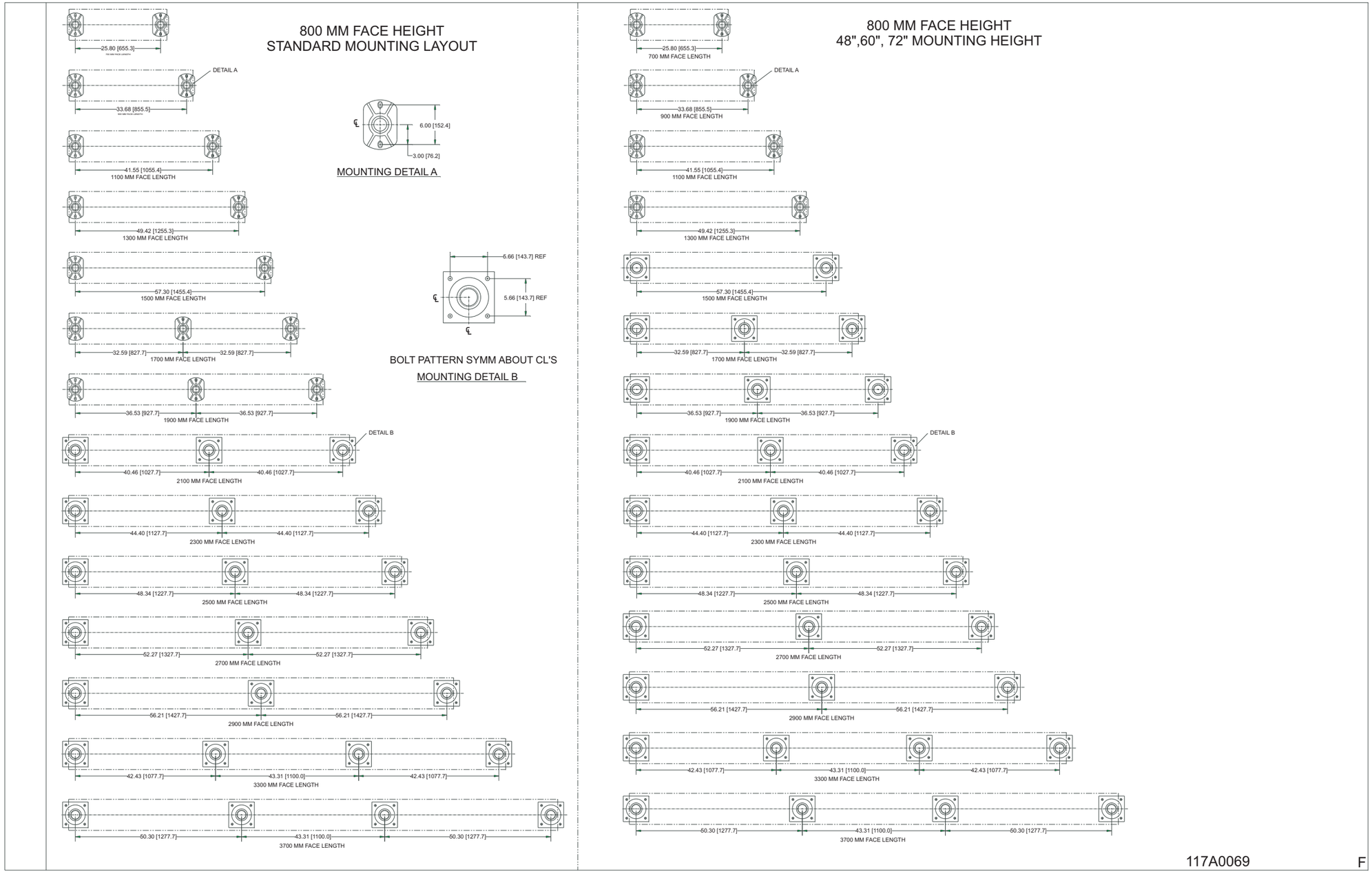

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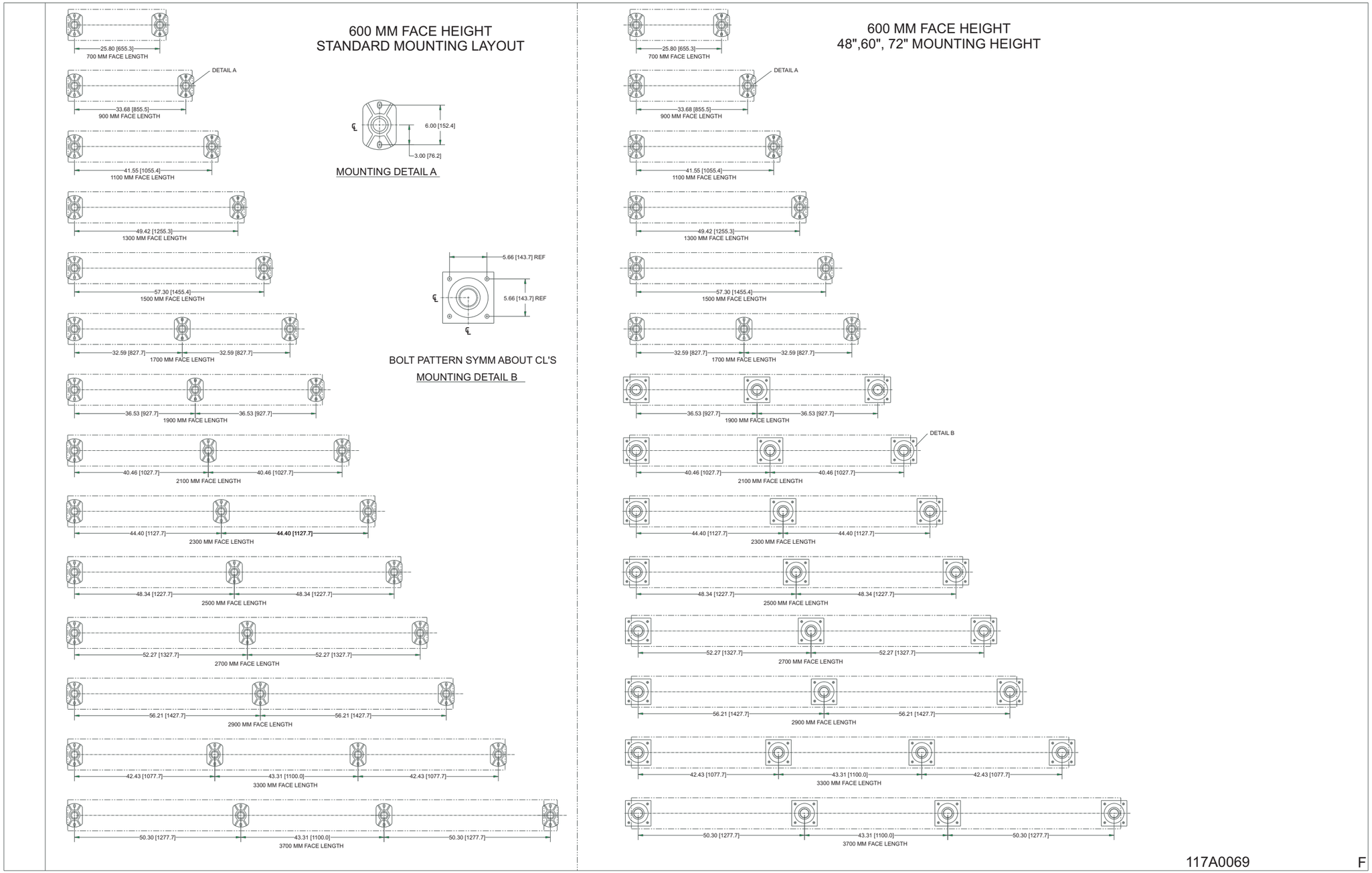
Figure 35: 800 mm Signs



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LED ICAO Taxiway and Runway Signs
User Manual

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